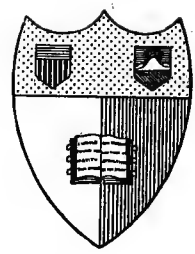

STUDY OF TEACHING

AN OBSERVATION RECORD BOOK

The function of the training school is to help the pupil-teacher to become a thoughtful and alert student of education, rather than to help him get immediate proficiency.

JOHN DEWEY.

BY

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INTRODUCTION

Teaching should be classified higher than as a craftsmanship, and yet this term is capable of suggesting a professional emulation which is wholesome. Workmanlike skill in the master tends strongly to excite ambitious admiration in his apprentice. To the learner of the teacher's art there are deeper understandings to fathom and more delicate touches of skill to acquire than are known to the tradesman. And so there is good reason why the learning may be approached with a genuine respect for the attainment which it demands. One may very much oftener be moved to wonder, "How is it done?" when viewing the mastery with which the skilled teacher sets a child upon higher ground than when, under the hand of the artisan, material things are rounded into useful form. An art capable of enlisting the highest gifts is what the student approaches in his study of teaching.

Attention is not to be centered in such a study upon mere mechanical performance. Controlling relationships and forces should be subjects of study rather than superficial processes and routine. These deeper aspects of teaching are approached in the observation room, after all, from the side of their concrete exemplification. Consideration of the psychological basis of teaching in the abstract has its values, but full realization of these values can come only through specific illustration and use. The desired responses of children in the school group cannot be understood sufficiently from the standpoint of the needs of the amateur teacher, until the school group has been made the subject of study.

The physical fitness of children, their mentality, vivacity or sluggishness, fatigue or freshness, seating and posture, cleanliness, the homogeneity of the group—these and scores of other factors, varying almost momentarily, must be studied under the influences created in the schoolroom which are designed to produce change or growth. Then there are the varieties of subject-matter, the conditions of weather, of health, and of schoolroom furnishings and equipment, all of which affect so much the teacher's work. Studies have to be made of the specific teaching situations in the different subjects of the curriculum, and account has to be taken of just how certain desired reactions are to be secured. All this means opportunity to clarify the student's educational psychology; but this, let us bear in mind, is *for the sake of his learning how to teach.* It is a matter of *showing* how a sound educational regimen is constituted versus *telling* how.

The student in his pursuit of observation studies may expect to gain respect for, as he gains experience in, a method which is scientifically penetrating and specific. The function of this type of training as a preventive of superficial teaching is obvious. The unguided observer, particularly if inexperienced, is naturally prone to take account of only general aspects of a piece of work. He will note only such things as: whether pupils give attention or not, whether the floor and windows are clean, whether pupils or teacher make mistakes as regards subject-matter, and the like. These things, important as they are, should come, in due

time, to be seen "with eyes shut." To give to students directions confined to matters of this kind, lying so close to the surface, is to supply only a minimum of help and to fail in ever making of them really incisive students of education. The questions propounded in these exercises go somewhat specifically into the various teaching situations. Students will find it difficult to answer them in some cases; but that is not unwholesome, so long as there are justly compensating values in the answers when once gained. Concerning the reality of the values attaching to technical aspects of schoolroom procedure no question any longer exists. These are indeed just what the teacher in training is most in pursuit of.

Observational studies are found to be most profitable when the teaching is of the demonstration type. It is the efficient way, in other words, that the student should have the benefit of systematic coöperation between the director in charge of the observation class and the demonstration teacher, or critic teacher. In the use of this manual it will be understood that the set of questions constituting a given "Exercise" is to be put into the hands of the demonstration teacher in advance of the time when the lesson for observation is to be given. The lesson, in fact, should be planned with the idea somewhat in view of its exhibiting, so far as possible, the characteristics of the teaching situation to which the given Observation Problem relates. Experience is proving more and more the superiority of demonstration lessons given by an expert teacher in comparison with observations in schools here and there, as convenience may direct. There is appreciable value, it must be admitted, in seeing as nearly normal schoolroom conditions as possible, and yet whatever profit it holds is soon gleaned, leaving the student still in great measure without due examples of highly efficient teaching. A plan such as is herein contemplated, which renders lessons that are to be studied directly amenable to the judgment of one who is a master of the teacher's art, seems calculated to afford highest advantages. This master in the ordinary case may be presumed to be the director of training.

The necessity should appear almost constantly to the student-teacher of breaking up in his own mind the association tendencies which cause him to tend so strongly toward teaching as he has been taught. Impressions of teaching recalled from childhood, like most of the complex relations of life, have to be recreated in the light of mature thought and experience. The point of view of the school child forbids that he should gather worth-while intelligence of what is fit in the schoolroom particularly as regards instruction. It is the antipode of that of the teacher, especially under the all but universal state of pupil-teacher antagonism prevailing in schools of all times, the present not excepted. The methods in general that are current in all but the best schools, even of the present day, moreover, are too crude to be safely imitated even if they were competently appraised. If there is anything in the training college justifying its existence, it may ignore almost completely the notions of pedagogy gained by pupils as they come up through the school preceding. The student should see that he will proceed on a safer basis if he lays aside these impressions. He must be quite open-minded.

The task therefore is the oft-recurring one of setting against custom imitation, the line of least resistance in behavior, the practice of referring in a rational way problems which have to be solved to the principles which solve them. Many

of the most difficult, and certainly the most commonly recurring teaching situations, can be produced at will. Their production, too, may amount to more than a mere dramatization. Under intelligent management it may constitute an entire reality. To be thrown into contact with this reality, first as an observer and again as a performer, is of course, the crucial feature of the student-teacher's training. He may, first of all, be impressed with the workmanship, the craftsmanship, the art of his teacher model. His interest will thereby be sharpened in the scientific controls by which such a complex performance is guided.

It is not mere capacity to imitate which the observation course is developing, but rather scholarly adaptability. A measure of liberal culture as a necessary condition precedent to best results from professional training in teaching is coming more and more to be appreciated. The man or woman of broad and substantial education in the liberal arts and sciences, in comparison with those who are without it, is universally recognized as more penetrating in his insights and more circumspect in action. In proportion, therefore, as the teacher in training is thus outfitted as an educated person, is he able to grasp intricacies of meaning and to seize in a satisfactory way upon varying occasions such as his profession affords.

Corollary to these general advantages arising from a substantial scholarship is the need of knowing a specific piece of subject-matter well before undertaking to teach it. While it may be true that there still are those who will contend that if one knows a subject he can teach it, there are assuredly none who will claim that special pedagogical training dispenses with the need of fundamental knowledge. In the course of training itself no more important aspect of successful teaching can be brought under observation than how well the masterly teacher knows his subject.

The observation studies outlined in this manual are conceived mainly in the light of the needs of student teachers working together in a group under a director of training. They constitute a convenient basis of understanding between their director and the demonstration teacher, besides furnishing what is more important, namely, *a definite objective toward which thinking may proceed as the model lesson goes forward.* Prior to this point in the studies, some discussion should have taken place in the group looking toward bringing out the full import of the more difficult questions. Intelligent assignment of observation work from day to day would necessarily involve this. Following observation of the teaching, discussion should be continued to the end of more or less definite solution of the problems presented.

The manual will be found serviceable also in cases where students for one reason or another may be carrying on observational studies singly instead of in groups. Those observing similar kinds of work, even though this work may be done by different teachers, may be brought together for conferences very much to the same purposes as in group studies. Individual studies of this kind will be productive of a wider range of data, although this plan presents elements of difficulty and waste which render it on the whole less serviceable. In so far as it may be used, however, specific problems in the mind of the student, and aids in the gathering of data relating thereto will be found the more important.

It seems evident, finally, that there is need of some such specific aids as are

embodied in this manual to give point to the visiting which is so universally recommended as a means of growth to the teacher in service. It is a usual courtesy on the part of a teacher-host to apprise the visitor of the kind of work that is under way; but even in the absence of this, a few moments' observation will usually suffice to refer the work going on to one or another of the types treated of in the manual. Visiting may thus be redeemed more or less completely from the aimlessness which so often attends it. The visiting teacher gains professionally in proportion as he holds himself to "hewing to the line," just as the director requires it of students in training. Professional training of teachers in all its aspects may be appreciably improved on the basis of this principle.

ACKNOWLEDGMENT

The author gratefully acknowledges valued assistance rendered in the preparation of this manual by numerous friends and associates in educational work. Special mention should be made of the following, each of whom offered encouraging and especially helpful criticisms: Miss Ida Odell Rudy and Miss Rebecca Coffin, Bolton Training School, Cleveland, Ohio; Miss May H. Prentice, Director of Training, Kent (Ohio) State Normal College; Dean H. C. Minnich, Teachers College, Miami University; Dean W. S. Gray, College of Education, University of Chicago; and Professor Frank M. McMurry, Teachers College, Columbia University.

SUGGESTIONS TO THE DIRECTOR OF TRAINING

1. See to it that students get the import of the Observation Problem and of each of the subordinate questions listed. Time should be taken before observation is attempted to give attention to difficulties in the minds of students which may have been raised by any feature of the Exercises.

2. Students should not be permitted to attempt a final writing of their answers to questions until after getting away from the observation classroom and after reading at least the most important references. Final results may be written in the book as illustrated on pages 10 and 11, or they may be handed to the instructor in more finished form as on pages 12 and 13. In either case brief notes should be taken as the lesson under observation proceeds.

3. References may be read ordinarily with most profit after observation. In such case preliminary consideration of questions as advised above is the more imperative.

4. Students will usually require special training in working out the summaries provided for in the manual.

5. Best results will be attained only if there is full coöperation between the director of training and the teacher whose work is to be observed. The manual should be in the hands of the latter, as well as the former, so that lessons may be shaped with a view to their displaying essential features sought by the class of observers.

INSTRUCTIONS TO THE STUDENT

1. Alertness of mind every moment of the time is of utmost importance in observation, as it will be found also in teaching. The mind of the student of teaching, as of the teacher, must be able to grasp several things at the same time. Attention has to be focused, to be sure; and yet the mind must be active in its "fringe of consciousness" as well. Scattering of attention, however, is to be guarded against.

2. Hold in mind the *observation problem* throughout the period, interpreting all questions in relation to it.

3. References cited in the several Exercises are arranged, as a rule, in order of importance. Read for specific things.

4. Write briefly; cogency of expression will be valued as well as completeness and accuracy of information.

5. Be specific; broad statements are valueless unless supported by explicit data.

6. Most careful study should be given to your summary. Analyze the data gathered during observation, considering it in relation to information gained from the references which you read; and work it into a concise statement or series of

statements that answer as completely as possible the question proposed under the head of the Observation Problem.

7. Write at least one thing under each of the heads, Things to Imitate and Things to Avoid, if the exercise at all furnishes it.

8. Write down your questions. Thoughtful observation can hardly fail to give rise to numerous things about which your mind will not be quite satisfied. To raise these points for discussion and settlement, so far as settlement may be possible, is *your opportunity*.

9. Note the date, grade of pupils, and name of teacher for each observation exercise.

CONTENTS

EXAMPLES ILLUSTRATING STUDENT'S MODE OF TREATMENT

NOTE.—These are based in each case on observation by the author of actual class exercises. The names used are fictitious. Pages 10, 11, 14, and 15 show sketchy answers such as students may readily write in long hand in the spaces following the questions; fuller treatments, such as the instructor may require to be handed in on separate sheets, are shown on pages 12, 13, 16, and 17.

EXERCISE I

General Topic: The Factors in Effective Teaching: (a) The Pupil.

Observation Problem: How is instruction affected by the composition of the instruction group?

1. What effects seem to come from there being a large or small number in the group? From disparities in age, size, race, or other personal characteristics?

Nineteen in group; satisfactory.
Fairly even size and age; one boy oversized; no deleterious effects.
Two girls relatively low intelligence; inactive half time.

2. What does the teacher do by way of putting the members individually or the group collectively in condition favorable for work?

Nothing except to take smiling attitude.

3. Does the group need working materials (textbooks, paper, pencils, etc.) which are not supplied in proper kind or amount? What are the effects of the lack of these things?

Books only necessary; one each provided; used only in assignment.

4. Do any members of the group show mental or physical defectiveness in relation to the type and standard of instruction employed? Point out your evidences.

None observed excepting as indicated under 1.
Evidences:—(a) Dull countenances, (b) shrinking attitude, (c) poor responses.

5. Find out whether the teacher in charge of the group observed has taken advantage of proper means of knowing as to possible defective equipment (eyesight, hearing, mentality, etc.) of individual pupils. What means of doing this are available to teachers?

Nothing done.
For eyesight, Snellin Chart—C. F. Hardy, New York, 25 cents; or Allport Chart—American Medical Association, Chicago.
For hearing, watch test,—ordinary watch held 3 feet from ear.
For mentality, Binet, Terman, or Yerkes test; to be used only after study and practice.

6. Cite instances showing the influence of the group in promoting intensified forms of effort or in helping pupils to learn.

Individuals affected by group enthusiasm.
Volunteer responses prompted by contributions of other pupils.
Boy, answering when girl named Vera is addressed, mockingly called Vera by other pupils.

7. Do the members of the group show training in coöperation? Do they show a disposition to coöperate with the teacher?

Yes; mutuality of respect amongst them; wholesome criticism of one another; willingness to share on equal terms in use of books from library.
Coöperative attitude toward teacher, excepting less intelligent and one or two others not reached by teacher.

8. Why are the members of this group present for instruction? How many would evidently remain if not required to, and why?

Great majority because of custom; few, boy and girl in particular, because of interest in activities of school.
Boy held apparently by liking for teacher.
Boy spends time watching birds in budding trees outside.

9. What evidences seem to indicate that the period of work is of proper duration, or too long, or too short?

Interest sustained to end; period could have been longer.

Summary:

(a) More homogeneous group, stronger influence of mental rapport.
(b) Only one pupil markedly apart, probably temporary lapse of interest.
(c) No noteworthy effects from individual variations.
(d) Low intelligence not of degree preventing successful work.
(e) Stimulus of group on individuals corroborative of results of Mayer, Triplett, Meumann, Schmidt, and Clark.
(f) Compensation for imperfect responses in corrective efforts elicited.
(g) Spontaneous social tendencies almost continually in evidence.

Things to Imitate:

(a) The selection of subject-matter.
(b) The kindliness and individual sympathy of the teacher.
(c) The encouragement given to volunteer responses.

Things to Avoid:

(a) The quick, agitated speech of the teacher.
(b) The inattention of the teacher toward one inactive boy.

Questions:

(a) How could this inactive pupil have been reached?
(b) Would it not be better to lengthen the period for class work in English somewhat, as for laboratory work in science?

References:

(a) King,—*Social Aspects of Education,* 357-369. [Mac.]*
(b) King,—*Education for Social Efficiency,* 138-145; 232-240. [Ap.]
(c) Betts,—*Social Principles of Education,* 135-147. [Scr.]

*See List of Publishers and Abbreviations, page 147.

Observation Report

Ninth Grade English — April 8, 1919 — Harriet Crowley, Student
Sixth Avenue Junior High School — Miss Lowther, Teacher

EXERCISE I

General Topic: The Factors in Effective Teaching: (a) The Pupil.

Observation Problem: How is instruction affected by the composition of the instruction group?

1. What effects seem to come from there being a large or small number in the group? From disparities in age, size, race, or other personal characteristics?

There were nineteen in the group, a number neither too large nor too small to affect instruction unfavorably. The pupils were of fairly even age and size, with the exception of one boy who was considerably over-sized. This did not, however, seem to affect his attitude toward the rest of the class or theirs toward him. Two of the girls of lower intelligence than the average of the group were noticeably inactive for about half of the time.

2. What does the teacher do by way of putting the members individually or the group collectively in condition favorable for work?

The teacher did nothing more than to take her place smiling before the class and address to them a few pleasant remarks.

3. Does the group need working materials (textbooks, paper, pencils, etc.) which are not supplied in proper kind or amount? What are the effects of the lack of these things?

Books only were necessary, and each individual had his own copy. These were used, however, only in the assignment.

4. Do any members of the group show mental or physical defectiveness in relation to the type and standard of instruction employed? Point out your evidences.

No defectiveness was observed beyond that indicated under question 1 above. The evidence of defectiveness in these two cases was their dullness of countenance, shrinking attitude, and imperfect responses.

5. Find out whether the teacher in charge of the group observed has taken advantage of means of knowing as to possible defective equipment (eyesight, hearing, mentality, etc.) of individual pupils. What means of doing this are available to teachers?

The teacher had done nothing under this head. Eyesight may be tested by use of the well-known Snellin chart, obtainable for twenty-five cents from C. F. Hardy, New York. A more desirable chart for teachers' use is one devised by Dr. Allport, which may be obtained from the American Medical Association, Chicago. The watch test is as good as any for testing hearing. It consists in finding out whether the ticking can be heard when an ordinary watch is held three feet from the ear of the subject being tested. The Binet, Terman, and Yerkes tests are the best known ways of determining mentality of pupils. Their results are to be relied upon, however, only when they are given by persons who have studied them carefully and are somewhat practiced in their use.

6. Cite instances showing the influence of the group in promoting intensified forms of effort or in helping pupils to learn.

The effects of group enthusiasm upon individuals were clearly in evidence in numerous instances. Successful contributions of individual pupils time after time induced volunteer responses on the part of others. One boy, breaking in with an answer when a girl named Vera was called upon, got his lesson unmistakably when he was mockingly called Vera by several other pupils.

7. Do the members of the group show training in coöperation? Do they show a disposition to coöperate with the teacher?

Training in coöperation was shown by pupils listening respectfully to contributions of others; by the wholesome spirit in which they criticized one another, and by fairness in arranging for the use of books drawn for class use from the library. They were willing to coöperate with the teacher with the exception of three or four, including those of lower intelligence, who had evidently not yet been "reached" by the teacher.

8. Why are the members of this group present for instruction? How many would evidently remain if not required to, and why?

The great majority of the class were evidently present because of the custom of school attendance among children of their age. A few, one boy and one girl in particular, gave evidence of a distinct preference to be in the class rather than elsewhere because of what the class had in hand. Another boy's liking for the teacher was probably strong enough to influence him to be present. One boy spent his time, so far as circumstances would permit, contemplating with evident envy the birds as they hopped about in the sunshine in the budding trees outside.

9. What evidences seem to indicate that the period of work is of proper duration, or too long, or too short?

The sustained interest to the very end showed that the period was not too long. It could have been longer.

Summary:

The more homogeneous the group, the stronger will be the influence of mental rapport in promoting the ends of instruction. Only one pupil stood widely apart in this exercise, and his case was probably one of temporary lapse of interest. Variation from the norm of the group in race, age, size, perceptional equipment, or physical fitness did not appear to be sufficient to stand seriously in the way of successful work. Pupils of relatively low intelligence were in evidence, but they were far from being in a state of helplessness. The influence of alert, self-controlled pupils, having well-defined permanent interest in the work in hand, was very noticeable in stimulating others. The exercise in this respect is corroborative of the evidence cited by King from Mayer, Triplett, Maumann, Schmidt, and Clark. There was compensation for the hindrances to the smooth progress of the exercise, occasioned by the imperfect responses of pupils of lower intelligence, in the corrective efforts which these partial or complete failures elicited from the brighter pupils. Spontaneous social tendencies were almost continually in evidence.

Things to Imitate:

(a) The selection of subject matter.
(b) The kindliness and individual sympathy of the teacher.
(c) The encouragement given to volunteer responses.

Things to Avoid:

(a) The quick, agitated speech of the teacher.
(b) The inattention of the teacher toward the one inactive boy.

Questions:

(a) How could this inactive pupil have been reached?
(b) Would it not be better to lengthen the period for class work in English somewhat as for laboratory work in science?

References:

(a) King,—*Social Aspects of Education*, 357-369.
(b) King,—*Education for Social Efficiency*, 138-145; 232-240.
(c) Betts,—*Social Principles of Education*, 135-147.

EXERCISE XLVIII

General Topic: Speed and Accuracy in Arithmetic.

Observation Problem. What are the best ways of promoting speed and accuracy in arithmetic work?

1. Is the subject-matter used in the exercise well chosen? How do you determine this?

Miscellaneous combinations in multiplication; well chosen.
(a) Adapted to pupils; (b) demanded by environment; (c) necessary to future needs in and out of school; (d) knowledge to be perpetuated; (e) not uninteresting, properly taught.

2. How much time is spent in rationalization of processes? Is there any drill in processes apparently not previously rationalized? Give reasons why this is or is not justifiable.

None; evidently previously rationalized.
(a) Insight into number relations foundation of mathematical culture; (b) meaning facilitates habituation; (c) forgotten processes re-created on basis of understanding.

3. Does the teacher give in sufficient measure special instruction as to ways of overcoming difficulties in the way of attainment of the ends of the exercise? Is time wasted in this?

No occasion.

4. What variations in the nature of the drill appear? Why should there be variations?

Row of digits, 0 to 9, on board. Product of each in order by 6, 9, 4, etc., given by pupils in concert, then individually in order, and miscellaneously. Next, products given skipping about in row, pupils reciting in order and miscellaneously. Flash cards with similar variations.
Variations afford relief from monotony and give interest.

5. Is the drill snappy and quick? How does the teacher "speed up" the exercise?

Not sufficiently. Only by personal urging.

6. Are short cuts introduced in the material used? How do these affect the interest of pupils?

No opportunity.

7. Mark the members of the class in percents as regards the degree of automatism they exhibit in the exercises practiced, and compare the three highest with the three lowest.

Not practicable; brief time and large class. Estimated 8 out of total of 45 perfect; three low as 50 per cent perfect.

8. Are any data taken by the teacher in the nature of measurement of progress of the class? What means, if any, is employed whereby pupils are enabled to measure their own progress?

No measurement of any kind.

9. How long is each part of the exercise continued? Record any signs of fatigue that you observe.

Entire exercise 15 minutes; about equally divided between blackboard and flash cards. Only sign of fatigue, lapse of attention,—two pupils twice each, one once.

Summary:

Ways of promoting speed used: (a) Concentration and quickness of teacher; (b) race idea; (c) direct urging; (d) announcing only once.
Ways not used: (a) Contests against time; (b) races between individuals and groups; (c) monitors; (d) Studebaker and Courtis practice exercises.
Accuracy promoted by: (a) Rejection of incorrect responses; (b) repetition of right products with combinations; (c) monitors; (d) number games; (e) forecasting; (f) chain problems; (g) Studebaker and Courtis practice exercises.

Things to Imitate:

(a) The quiet, decisive, stimulating manner of the teacher.
(b) Easy handling of class management factors, including discipline.
(c) Completeness of preparation before work is begun.

Things to Avoid:

(a) Inattention to differences of ability within the class.
(b) Mistakes in attire of the teacher.
(c) Complete exclusion of pupils from leadership.

Questions:

(a) How determine the precise reasons for slow, inaccurate responses?
(b) Was this class up to standard in its command of multiplication combinations?

References:

Same as for Exercise XLVII.

Observation Report

Fourth Grade Arithmetic **May 14, 1919** **James Bradley, Student**
Hayes School **Miss Rhodes, Teacher**

EXERCISE XLVIII

General Topic: Speed and Accuracy in Arithmetic.

Observation Problem: What are the best ways of promoting speed and accuracy in arithmetic work?

1. Is the subject-matter used in the exercise well chosen? How do you determine this?

The subject-matter used, miscellaneous combinations in multiplication, was well chosen, for the following reasons:

(a) It is properly adapted to pupils and environment.
(b) It is necessary to further schooling and to future needs outside of school.
(c) It is knowledge which should by all means be perpetuated.
(d) If properly taught, it is capable of interesting pupils and arousing self-activity.

2. How much time is spent in rationalization of processes? Is there any drill in processes apparently not previously rationalized? Give reasons why this is or is not justifiable.

Pupils did not seem to be in need of rationalization of processes. In practically every case, processes should be rationalized before drill in them begins, for these reasons:

(a) Insight into number relationships constitutes the foundation of mathematical culture.
(b) Grasp of meaning greatly facilitates learning.
(c) Mastery of mathematical principles makes possible the re-creation of processes temporarily forgotten.

3. Does the teacher give in sufficient measure special instructions as to ways of overcoming difficulties in the way of attainment of the ends of the exercise? Is time wasted in this?

No special difficulties arose.

4. What variations in the nature of the drill appear? Why should there be variations?

A row of digits from 0 to 9 were arranged in irregular order on the blackboard. The pupils gave in concert the product of each number as it came in the row, first by 6, then by 9, then by 4, etc. Then products were given by individuals in order round the class, and again miscellaneously. The teacher now pointed out numbers, skipping about along the row as pupils gave the products in concert, then in regular and in miscellaneous order as individuals. Flash-cards were next used with about the same variations.

Variations are necessary as a means of relief from monotony and to keep up interest and activity.

5. Is the drill snappy and quick? How does the teacher "speed up" the exercise?

The drill was not quite sufficiently snappy. The teacher depended almost entirely upon her own personal urging as a means of giving it quickness and zest.

6. Are short cuts introduced in the material used? How do these affect the interest of pupils?

There was no opportunity for use of short cuts.

7. Mark the members of the class in percents as regards the degree of automatism they exhibit in the exercises practiced, and compare the three highest with the three lowest.

Lack of time and the large size of the class, 45, made it impracticable to mark pupils as suggested. As nearly as could be determined, eight pupils showed practically perfect command of the combinations while three had attained only about fifty per cent automatism.

8. Are any data taken by the teacher in the nature of measurement of progress of the class? What means, if any, is employed whereby pupils are enabled to measure their own progress?

No measurement, as such, was connected with the exercise.

9. How long is each part of the exercise continued? Record any signs of fatigue that you observe.

Only fifteen minutes were consumed, about equally divided between blackboard and flash-card work. A little larger proportion of the time was given to concert than to individual recitation. The only sign of fatigue observed was lapse of attention, occurring twice each in the cases of two pupils, and once in the case of another.

Summary:

The best ways of promoting speed and accuracy exhibited in this exercise were the following:

(a) Concentration, quickness, and insistence on the part of the teacher.
(b) By having pupils regard it as a race.
(c) By direct verbal stimulation of pupils.
(d) By announcing combinations only once.
(e) By repetition of combinations missed with the right products.

Other ways not employed in the exercises are:

(a) Races between individuals or divisions of the class.
(b) Use of monitors who break in on slow pupils and snap up wrong responses.
(c) The Studebaker practice exercises and the Courtis practice tests.

Things to Imitate:

(a) The quiet, decisive, stimulating manner of the teacher.
(b) Easy handling of class management factors, including discipline
(c) Completeness of preparation before work is begun.

Things to Avoid:

(a) Inattention to differences of ability within the class.
(b) Mistakes in attire of the teacher.
(c) Complete exclusion of pupils from leadership.

Questions:

(a) How determine precisely the reason for slow, inaccurate responses?
(b) Was this class up to standard in its command of multiplication combinations?

References:

Same as for Exercise XLVII.

EXERCISE I

General Topic: The Factors in Effective Teaching: (a) The Pupil.

Observation Problem: How is instruction affected by the composition of the instruction group?

1. What effects seem to come from there being a large or small number in the group? From disparities in age, size, race, or other personal characteristics?

2. What does the teacher do by way of putting the members individually or the group collectively in condition favorable for work?

3. Does the group need working materials (textbooks, paper, pencils, etc.) which are not supplied in proper kind or amount? What are the effects of the lack of these things?

4. Do any members of the group show mental or physical defectiveness in relation to the type and standard of instruction employed? Point out your evidences.

5. Find out whether the teacher in charge of the group observed has taken advantage of proper means of knowing as to possible defective equipment (eyesight, hearing, mentality, etc.) of individual pupils. What means of doing this are available to teachers?

6. Cite instances showing the influence of the group in promoting intensified forms of effort or in helping pupils to learn.

7. Do the members of the group show training in coöperation? Do they show a disposition to coöperate with the teacher?

8. Why are the members of this group present for instruction? How many would evidently remain if not required to, and why?

9. What evidences seem to indicate that the period of work is of proper duration, or too long, or too short?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) King,—*Social Aspects of Education,* 357-369. [Mac.]*
(b) King,—*Education for Social Efficiency,* 138-145; 232-240. [Ap.]
(c) Betts,—*Social Principles of Education,* 135-147. [Scr.]

(See List of Publishers and Abbreviations, page 147.)

EXERCISE II

General Topic: The Factors in Effective Teaching: (a) The Pupil.

Observation Problem: What are the effects of the physical condition or comfort of pupils?

1. Is the adjustment of seats such that pupils can easily maintain a correct sitting posture? What proportion are improperly adjusted, and in what respects? Record such evidence as you see of training of pupils toward right habits as to posture.

2. What provision is made for resting pupils from the sitting posture?

3. Try to discover any physical effects in individual pupils that seem to come from bad habits of posture (elevation of right or left shoulder, scoliosis, lordosis, round shoulders, etc.).

4. What proportion of pupils seem properly clothed? Note any effects that seem to come from clothing that is too thick, too scanty, or ill fitting. What provisions does the school afford for the care of clothing?

5. What conditions, such as temperature, lighting, and ventilation of the room, state of the weather, distracting noises, etc., seem to operate as "limiting factors" in relation to the work of pupils?

6. Do you see adenoid symptoms,—mouth breathing, drooping eyelids, languid expression, etc?

7. Are any pupils anemic? If so, try to find out the cause, and report particularly on the cases.

8. Note the characteristics that make certain children exceptional,—supernormal or subnormal mentally, inability to concentrate, nervousness, extreme temper, etc.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Groszmann,—*The Career of the Child,* IV. [Badg.]
(b) Terman,—*The Hygiene of the School Child,* XXI, also VII, XIII, XIV. [H. Mif.]
(c) Cornell,—*Health and Medical Inspection of School Children,* 180-193. [Dav.]
(d) Rowe,—*Physical Nature of the Child,* II, III, VIII, X. [Mac.]
(e) Shaw,—*School Hygiene,* VIII, IX, XI. [Mac.]
(f) Dresslar,—*School Hygiene,* V. XV, XVI, XIX. [Mac.]
(g) Barry,—*The Hygiene of the School-Room,* XII, XVIII. [Sil. B.]
(h) Bancroft,—*The Posture of School Children,* XXII. [A. P. L.]
(i) Thorndike,—*Principles of Teaching,* II. [Seil.]
(j) Rapeer,—*Educational Hygiene,* XVIII, XIX, XX, XXX. [Scr.]

EXERCISE III

General Topic: The Factors in Effective Teaching: (b) Subject-matter.

Observation Problem: How does the character of the subject-matter employed affect the efficiency of teaching?

1. What are the essentials of the subject-matter covered in the lesson? Was it well-conditioned as to quantity, or did it embrace too much or too little?

2. Applying accepted criteria of value, determine which element of subject-matter is most valuable, and which is least valuable.

3. As the work is given, ask yourself with regard to each element of subject-matter whether it could have been dispensed with. What would thus be excluded?

4. Did the controlling topics stand out clearly, the lesson in general being organized around these, or were the details merely "recited" without regard to their relative importance?

5. Give evidence showing whether the subject-matter was organized according to the logical or the psychological point of view. If psychological, what was the basis of appeal to the children observed?

6. Was any special means of vitalizing the subject-matter employed? If so, describe it.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Colgrove,—*The Teacher and the School,* IX. [Scr.]
(b) Betts,—*Classroom Method and Management,* VIII. [Bo. M.]
(c) McMurry,—*Elements of General Method,* II. [Mac.]
(d) Evans,—*Growing a Life,* IX. [Rand.]
(e) Klapper,—*Principles of Educational Practice,* VI. VII. VIII, IX. [Ap.]

EXERCISE IV

General Topic: The Factors in Effective Teaching: (c) The Teacher.

Observation Problem: How well equipped is the teacher for his work?

1. Take account of the teacher's personality,—appearance, health, animation, poise, personal force, etc.

2. Are weaknesses or excellences in evidence in general scholarship, or in command of the subject-matter immediately in hand?

3. To what extent do details of procedure seem to depend upon the inspiration of the moment rather than upon previous preparation? How does this affect the work?

4. Is the general bearing of the teacher toward the school satisfactory? Cite particular things by which you determine this.

5. Is adaptiveness to varying class conditions and individual differences exhibited? Cite instances, if they occur, showing modifications of method to suit unforeseen conditions in the mental attitude of the class or of individual children.

6. Does the teacher work as though the last resource of his nature were drawn into requisition, or is "reserve power" in evidence? How does his capacity in this respect seem to affect the work?

7. What evidences in the school do you see of appreciation on the part of the teacher of neatness, order, system, etc.? To what extent does this seem to have been caught by pupils?

8. What evidences of strong leadership, or lack of it, do you see in the teacher?

9. What seems to be the teacher's professional attitude? Answer fully, showing by your answer that you yourself know what sort of professional attitude is to be desired.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Colgrove,—*The Teacher and the School,* I, II. [Scr.]
(b) Groszmann,—*The Career of the Child.* I. [Badg.]
(c) Pearson,—*The Vitalized School,* II. [Mac.]
(d) Keith,—*Elementary Education,* XIV. [S. F.]
(e) Betts,—*The Recitation,* IV. [H. Mif.]

EXERCISE V

General Topic: The Factors in Effective Teaching: (d) Affective Conditions.

Observation Problem: How do emotional factors and emotional states affect classroom work?

1. How does the general emotional tone of the classroom impress you? Is it buoyant, happy, dull, depressed, gloomy? Cite effects.

2. To what extent is it the effect of the personality or spirit of the teacher? How is the teacher affected by it?

3. Do striking emotional conditions appear in individual pupils? To what do they seem to be due, and how do they affect the work in hand?

4. What relation do the physical conditions of the room, temperature, light, tint of the walls, decorations, cleanliness, etc., seem to bear toward the emotional tone?

5. To what extent is the tone of the classroom due to the kind of activity in which the pupils are engaged?

6. Point out incidents arising in instruction which excite significant emotional responses in pupils.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Klapper,—*Principles of Educational Practice*, XXII. [Ap.]
(b) Colvin and Bagley,—*Human Behavior*, VI. [Mac.]
(c) Thorndike,—*The Principles of Teaching*, XII. [Seil.]
(d) Earhart,—*Types of Teaching*, 126-7. [H. Mif.]

EXERCISE VI

General Topic: The Nature and Need of Classroom Attention.

Observation Problem: What are the kinds of attention with which we have to do in teaching; and what relation do they sustain to pupils' learning?

1. In cases wherein attention seems to be spontaneous (primary passive) distinguish the instinctive groundings as far as you can.

2. In cases where active attention is in evidence, what seems to be the motive, and how has it been awakened?

3. Give from the observation at least one good illustration of each of the three kinds of attention defined by psychologists.

4. Does the work of the teacher indicate a consciousness of the relation of adequate interest and motive to success in learning? Give evidences.

5. Is illustrative material used or blackboard work done by the teacher or pupils? What are the effects upon pupils' attention?

6. To what extent do pupils give evidence of the habit of giving attention as school work goes on?

7. Distinguish in so far as you can the measure of results of the work in relation to the kind or degree of attention which pupils gave to it.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Bagley,—*Classroom Management*, IX. [Mac.]
(b) Hamilton,—*The Recitation*, III. [Lipp.]
(c) Strayer,—*Brief Course in the Teaching Process*, 35-38. [Mac.]

EXERCISE VII

General Topic: Maintaining Attention.

Observation Problem: How to gain and hold attention.

1. Consider carefully the nature of the subject-matter and the personality of the teacher as regards the likelihood of their commanding the attention of pupils.

2. Make a catalogue of the principal evidences of attention which you see, indicating those which point to especial intimacy of mental contact as between the teacher and pupils or between the members of the group.

3. Observe carefully a limited number of cases of inattention, and explain as far as you can the causes.

4. Note the effect of interruptions of pupils upon their attention.

5. Note changes in the tone of voice or bodily action of the teacher, modifications of method, or variations in devices, that seem calculated to keep up interest and attention.

6. If the work involves motor activity on the part of pupils, note its effect upon attention.

7. If directions or admonitions are given by the teacher to the end of maintaining attention, do they seem worth while?

8. What are the principal distractions that occur? Which one was most disastrous, and why? How was it dealt with?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Strayer and Norsworthy,—*How to Teach*, III. [Mac.]
(b) Strayer,—*A Brief Course in the Teaching Process*, III. [Mac.]
(c) Bagley,—*The Educative Process*, VI. [Mac.]
(d) Colvin,—*The Learning Process*, XVII, XVIII, XIX. [Mac.]
(e) Colvin and Bagley,—*Human Behavior*, IV. [Mac.]

EXERCISE VIII

General Topic: Motive in Teaching.

Observation Problem: How to give adequate motive to classroom work.

1. Find out whether the teacher in making the assignment of the present lesson gave definite attention to the matter of awakening adequate motive for pupils' attack of it. What was done to this end? Was it profitable?

2. To what extent do interests manifested by the class appear to be characteristic of the age of the pupils?

3. Mention some things showing the effects of instinctive tendencies in giving motive to pupils' efforts.

4. Describe one or two situations, if they develop, in which pupils appear to be affected by a real sense of need of doing the work which the class has in hand.

5. Does the exercise or any part of it take the form of a group enterprise or project? If so, how does this condition of affairs affect the motive with which pupils work?

6. In what respects does the exercise appeal to the play impulses or vocational aspirations of pupils?

7. To what extent do rewards or penalties apply in motivating pupils' efforts? Adduce such evidences as you can bearing upon the adequacy of these as incentives.

8. Is the puzzle-working insinct brought into play? If so, explain how.

9. To what extent does real self-activity prevail during the exercise? Show any instance, if there be such, where self-initiated activity as well as self-directed activity is evident.

10. What indications point to an intelligent appreciation on the part of the teacher of the relation of adequate motive to economy in learning?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Wilson and Wilson,—*Motivation of School Work*, I. III, III ff. [H. Mif.]
(b) Charters,—*Methods of Teaching*, VIII. [R. P.]
(c) DeGarmo,—*Interest and Education*, III, IV. VIII. [Mac.]
(d) Pearson,—*The Evolution of the Teacher*, X. [Herr.]
(e) McMurry,—*Elements of General Method*, III. [Mac.]
(f) Dewey,—*Interest and Effort*. [H. Mif.]

EXERCISE IX

General Topic: Habit Forming.

Observation Problem: How do habits help, or how do they hinder? How are good habits formed or bad ones broken?

1. Tabulate under the following heads the habits observed during the period of work:

(a) Physical,—standing or sitting posture, walking, carrying the head or arms, gesture, etc.

(b) Speech.

(c) Writing.

(d) Personal manners.

(e) Personal hygiene.

(f) Thinking.

(g) Obedience.

2. Speak of any of these which seem to have a specially significant effect upon character or efficiency.

3. Report acts of the teacher and of pupils that are consistent with recognized principles of habit formation.

4. Report others that are inconsistent with these principles.

5. Note the strained effort in instances of behavior that is not habituated.

6. Cite habits which seem to you to be in the formative stage.

7. Record any instance observed of a good habit which has become a hindrance under new circumstances.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) James,—*Talks to Teachers,* VIII. [Holt]
(b) James,—*Psychology—Briefer Course,* X. [Holt]
(c) Colgrove,—*The Teacher and the School,* XXIII. [Scr.]
(d) Colvin,—*The Learning Process,* 40-48. [Mac.]
(e) Strayer & Norsworthy,—*How to Teach,* IV. [Mac.]
(f) Colvin and Bagley,—*Human Behavior,* XI. [Mac.]

EXERCISE X

General Topic: The Class Exercise.

Observation Problem: What are the essentials of a well ordered class exercise?

1. State the aim of the recitation witnessed. Were the members of the class directly apprised of the aim? Why was the course chosen in this matter right, or why wrong?

2. To what extent does the teacher use the textbook? Find out whether the lesson is based on a textbook assignment, and determine as to the adaptation of the questions asked, to the subject-matter studied by the pupils.

3. Is there a study-class in the room as well as the class engaged in the exercise witnessed? If so, record effects you observe of the presence of one class upon the work of the other.

4. Analyze the lesson so as to show as fully as you can the "teaching points" which the teacher has in mind to be made. How directly do these contribute toward attainment of the aim?

5. What is the mode of instruction,—question and answer, topical, rote, drill, or telling on the part of the teacher?

6. Try to discern at least five instances of mental association on the part of pupils, and record them.

7. If a summary is made at the end of the lesson, who makes it, and what is its nature?

8. When is the assignment made? What proportion of the period does it occupy? Note specifically what is done as regards: (a) motivation, (b) definiteness.

9. Count carefully and record the number of questions asked by pupils. Record any of these that you regard as especially significant.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Betts,—*The Recitation.* [H. Mif.]
(b) LaRue,—*The Science and the Art of Teaching,* XIV, XV [A. B. C.]
(c) Colgrove,—*The Teacher and the School,* XXI. [Scr.]
(d) Betts,—*Classroom Method and Management,* III. [Bo. M.]
(e) Keith,—*Elementary Education,* V. [S. F.]
(f) Charters,—*Methods of Teaching,* XIII. [R. P.]

EXERCISE XI

General Topic: Types of Procedure: Testing.

Observation Problem: What are the best ways of testing pupils' mastery of school work?

1. What form of test predominates,—(a) for permanently grounded knowledge, (b) preparation of a recent assignment, (c) or powers of execution?

2. What are the chief expedients employed,—(a) question and answer, (b) topical discussions, (c) application problems, (d) or performance? To what extent, if at all, are objective or standardized tests used?

3. To what extent does the testing involve use of knowledge as in life situations?

4. Who is the arbiter regarding the results of testing, the instruction group or the teacher?

5. With what other forms of teaching, if any, is the testing combined?

6. Criticize the teacher's questioning as to,—(a) speed, (b) kinds of questions, (c) skill in forming questions, (d) skill and judgment in putting questions and dealing with answers.

7. Record two of the best questions used and two of the worst, giving in each case your reasons for so regarding them.

8. To what extent do the pupils ask questions, and how are their questions dealt with?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Thorndike,—*Principles of Teaching,* XVI. [Seil.]
(b) Strayer.—*A Brief Course in the Teaching Process,* IX. X. XI. [Mac.]
(c) Earhart,—*Types of Teaching,* IX. [H. Mif.]
(d) Betts,—*The Recitation,* 5-12; 55-78. [H. Mif.]
(e) Keith,—*Elementary Education,* 151-162. [S. F.]
(f) DeGarmo,—*Interest and Education,* XIV. [Mac.]

EXERCISE XII

General Topic: Types of Procedure: Development by Induction.

Observation Problem: What are the essentials of instruction through which generalized types of knowledge are realized?

1. Cite data indicating whether the efforts of the teacher looking toward a favorable state of mind in pupils are of the nature of prompting recall of past experience, or awakening motive, or both.

2. Show whether or not the objects, facts, or examples presented for examination and comparison are made duly clear and real. Note any that do not seem pertinent.

3. Note any data of value which are offered voluntarily by pupils.

4. Note the evidences and pedagogical results of at least five significant acts of mental association on the part of individual pupils. What is taking place in the instruction that seems to induce each of these?

5. Identify the major inference, noting,—(a) the independence of individual pupils in making it, (b) the clearness with which it is conceived, and (c) the effects as regards the sense of satisfaction or pleasure which it gives

6. What is done toward verification of the generalization learned?

7. If a verbal statement of the generalization is formulated, by whom is this done?

8. Give evidences indicating whether a sufficiency of reflective thinking is done by the pupils.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Strayer,—*A Brief Course in the Teaching Process,* V. [Mac.]
(b) Earhart,—*Types of Teaching,* V. [H. Mif.]
(c) McMurry,—*Method of the Recitation,* II, VIII, XI. [Mac.]
(d) Bagley,—*The Educative Process,* XIX. [Mac.]
(e) Bachman,—*Principles of Elementary Education,* 208-228; 244-256; 262-275. [Hea.]
(f) Dewey,—*How We Think,* 201-213. [Hea.]
(g) Thorndike,—*Principles of Teaching,* 147-160. [Seil.]
(h) Tompkins,—*The Philosophy of Teaching,* 12-29. [Ginn]

EXERCISE XIII

General Topic: Types of Teaching: (a) Development by Deduction.

Observation Problem: How may pupils be taught to make proper use of generalized knowledge?

1. State specifically the problem proposed for solution, and characterize the mental attitude regarding it which the teacher succeeds in creating.

2. Evaluate the problem from the standpoint of its educational worth.

3. To what extent is the pupils' analysis of the problem dominated by the teacher? Did the pupils volunteer questions or suggestions?

4. How is the correct law or principle brought to bear upon the undetermined question? To what extent are fallacious principles proposed? Are they proposed by pupils or teacher? By whom is their worth determined?

5. What evidences appear showing sufficient understanding on the part of the pupils of the applicability of the correct generalization?

6. Is final judgment suspended until adequate data have been brought to bear?

7. Are conclusions properly verified?

8. Resolve the procedure, if possible, into definite steps.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Strayer,—*A Brief Course in the Teaching Process,* VI. [Mac.]
(b) Bagley,—*The Educative Process,* XX. [Mac.]
(c) Earhart,—*Types of Teaching,* VI. [H. Mif.]
(d) Bachman,—*Principles of Elementary Education,* 144-155; 228-237; 275-281. [Hea.]
(e) Thorndike,—*Principles of Teaching,* 147-154; 160-164. [Seil.]

EXERCISE XIV

General Topic: Types of Teaching: (b) Study.

Observation Problem: How may pupils be trained in efficient seeking after information to be found in books?

1. What is the end toward which the study of the group is directed? Is it of the nature of a problem? How does it affect the pupils as regards the motive with which they work?

2. Estimate the success of the teacher in securing concentration of mind upon the material studied. Enumerate the various means employed to promote concentration.

3. Does the teacher direct and dominate too extensively or is the exercise advanced in sufficient degree through the initiative and resourcefulness of the group?

4. To what extent does the exercise prompt recall, evaluation, and use of pupils' past experiences?

5. Compare the number of questions asked by pupils with the number asked by the teacher? Is questioning on the part of pupils properly encouraged?

6. What is done by way of giving training in wresting the thought from material read,—such as analysis, re-reading, reflection, etc.?

7. Is the validity of any of the data challenged and then verified? How is the latter done?

8. What attention is given to training in the mechanics of study,—use of indexes, maps, or topical outlines; making of notes; use of marginal headings and references; underscoring; summarizing?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Earhart,—*Types of Teaching*, XIV. [H. Mif.]
(b) Strayer,—*Brief Course in the Teaching Process*, VIII. [Mac.]
(c) Strayer & Norsworthy,—*How to Teach*, XIV. [Mac.]
(d) Hall-Quest,—*Supervised Study*, VII, VIII, [Mac.]
(e) Earhart,—*Teaching Children to Study*. [H. Mif.]
(f) McMurry,—*How to Study and Teaching How to Study*. [H. Mif.]

EXERCISE XV

General Topic: Types of Teaching: (c) Drill.

Observation Problem: How to conduct a successful drill exercise.

1. Determine the specific end or objective of the exercise. How does awareness of this end affect the efforts of pupils?

2. Does the drill involve predominately precision in motor activity, quickness and accuracy of memory responses, readiness in mental associations, or command of more complex habits of thinking?

3. Is there due repetition of the physical or mental activity which is to be automatized?

4. Does the exercise at any time become monotonous? If so, why? If not, how is monotony prevented?

5. Is there a proper degree of zest maintained throughout the exercise? Account for its presence or absence. Note the nerve tension in case it seems excessively rapid.

6. What is done by way of relieving special difficulties encountered by individual pupils?

7. Make note of such evidences as you can get indicating whether or not drill exercises are properly followed up by further drills of similar kind and by attention in the school to activities drilled on as they are casually brought into use.

8. What was the cause of any pleasure or displeasure which the class found in the exercise?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Strayer.—*Brief Course in the Teaching Process*, IV. [Mac.]
(b) Earhart.—*Types of Teaching*, XII. [H. Mif.]
(c) Strayer and Norsworthy.—*How to Teach*, IV. [Mac.]
(d) Charters.—*Methods of Teaching*, 230-234. [R. P.]
(e) Betts.—*The Recitation*, 19-26. [H. Mif.]

EXERCISE XVI

General Topic: Types of Teaching: (d) Conversation-Lecture.

Observation Problem: How to conduct a profitable class conference.

1. What observations are to be noted regarding the adaptability of the subject matter to the class and the method used?

2. Does the teacher bring about pupil participation primarily by means of questions, or by remarks addressed to the class as a whole or to individual pupils? What differences in effects do you observe?

3. To what extent are measures of repression necessary to preserve order? Criticize such measures as were used and indicate any others that in your judgment could have been employed with justification.

4. Determine and record as far as possible the motive prompting spontaneous participation of pupils.

5. When the teacher engages in remarks to some length, or lectures, what to you seems to be the nature of such pupil activity as is going on while the teacher is speaking? What pupil reactions follow?

6. Determine and record the aim of the lesson and any order of development which it may show.

7. Take note of tendencies toward lagging in the conversation and of the way in which the teacher overcomes them, in so far as success in this is attained.

8. Estimate the ratio of pupil activity to that of the teacher.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Klapper,—*The Teaching of English*, II. [App.]
(b) Leonard,—*English Composition as a Social Problem*, 37-43. [H. Mif.]
(c) Strayer and Norsworthy,—*How to Teach*, 207-211. [Mac.]
(d) Leiper,—*Language Work in Elementary Schools*, 25-32; 57-58; 83-86; 227-8. [Ginn]
(e) Campagnac,—*The Teaching of Composition*, 31-33. [H. Mif.]
(f) Betts,—*The Recitation*, 45-48. [H. Mif.]

EXERCISE XVII

General Topic: Types of Teaching: (e) Socialization.

Observation Problem: How may the class exercise be conducted so as to cultivate social feeling and afford training in social coöperation?

1. How completely does the exercise answer to the characteristics of a "self-initiated group project"?

2. Point out aspects of the work with which the teacher is too much or too little concerned, giving reasons. Note the extent to which the teacher has intentionally and desirably made his presence unnecessary.

3. Cite situations which show group influence in directing or failing to direct the activities of individuals.

4. Point out one or more instances of distinctly joint effort of two or more individuals. How nearly equally do the members of the group share in the activities going on? If inequality exists, is it due to the nature of the activity or to the abilities of pupils?

5. What values in the nature of knowledge or skills appear in the exercise?

6. To what extent does socialization of the exercise serve to enlist more active interest and effort?

7. Estimate the efficiency of the exercise, that is, the result in relation to the time and energy devoted to it.

8. Estimate the value of this type of work in promoting the realization of the ideal, "the school is life."

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Strayer,—*Brief Courses in the Teaching Process*, XII. [Mac.]
(b) Pearson,—*The Vitalized School*, XV. [Mac.]
(c) Scott,—*Social Education*, VI-VII. [Ginn]
(d) King,—*Education for Social Efficiency*, XV. [Ap.]
(e) Earhart,—*Types of Teaching*, XI. [H. Mif.]
(f) Smith,—*An Introduction to Educational Sociology*, XIX. [H. Mif.]

EXERCISE XVIII

General Topic: Writing Habits.

Observation Problem: What conditions favor to the highest degree acquisition of the art of handwriting?

1. Criticize the adaptation of the writing tasks to the maturity of pupils and the hygienic conditions under which the work is done.

2. Evaluate the kind of writing which is being taught from both the practical and the pedagogical points of view. What determines the standard of attainment which is set up?

3. To what extent are pupils put in possession of means of measuring their own success and progress?

4. How is the exercise motivated?

5. Give your reasons for or against the relative attention given in the exercise observed to handwriting forms as against position and movement.

6. To what degree is ease of position and movement attained?

7. How are clear and correct mental images of letters or words taught?

8. What means are employed for stimulating speed?

9. In what respects does the exercise meet the standards of a successful school drill?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Freeman.—*Principles of Method in Teaching Writing, Eighteenth Yearbook N. S. S. E.* [P. S.]
(b) Thompson.—*Psychology and Pedagogy of Writing*, IV. [W. & Y.]
(c) Freeman.—*Psychology of the Common Branches*, II. [H. Mif.]
(d) Rapeer.—*Teaching Elementary School Subjects*, IV. [Scr.]
(e) Charters.—*Teaching the Common Branches*. II. [H. Mif.]
(f) Betts.—*Classroom Method and Management*, XVIII. [Bo. M.]
(g) Kendall and Mirick.—*How to Teach the Fundamental Subjects*, 145-163. [H. Mif.]
(h) Thorndike.—*Principles of Teaching*, XIV. [Seil.]

EXERCISE XIX

General Topic: Elementary Science: (a) Observation and Appreciation.

Observation Problem: How may pupils be helped toward enjoyment of contact with nature?

1. If the exercise is conducted indoors, give evidences noted indicating use of out-of-doors experiences. Is there evidence that all or a majority of the class shared in these experiences, or was the experience contribution made by a few pupils?

2. What effects seem to follow any use which may be made of myths of nature, or of personification of objects of nature?

3. How does the interest exhibited by the children in the material with which the lesson deals compare with that excited by other kinds of subject matter? Try to account for any differences that appear.

4. To what extent, and in what kind, are drawings used, or pictures, charts, etc.?

5. To what extent are special instruments or apparatus required in the lesson?

6. To what extent is the attention of pupils directed to use, beauty, curious or wondrous structure, or mystery in the things studied?

7. Is the exercise related in any way to gardening or construction projects in the science field?

8. Estimate the value of the lesson as regards development of habits of observation, kindness to the things of nature, and moral or religious precept.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Trafton,—*The Teaching of Science in the Elementary School,* I-IV. [H. Mif.]
(b) Coulter, Coulter & Patterson,—*Practical Nature Study and Elementary Agriculture,* VII. [Ap.]
(c) Groszmann,—*The Career of the Child,* XI. [Badg.]
(d) Lloyd & Bigelow,—*The Teaching of Biology,* II. [Long.]
(e) Rapeer,—*Teaching of Elementary School Subjects,* XV. [Scr.]
(f) Comstock,—*Handbook of Nature-Study,* 1-24. [Com.]
(g) Hodge,—*Nature Study and Life,* 1-31. [Ginn]

EXERCISE XX

General Topic: Elementary Science: (b) Association and Meaning.

Observation Problem: How may pupils be helped toward reducing their observations in nature to organized knowledge?

1. To what extent does the lesson deal with nature observed first-hand rather than with book information about nature?

2. If the lesson is a study of a type, criticize the selection of the type from the standpoint of: (a) its representative character; (b) its importance in itself; (c) its accessibility or the availability of information concerning it.

3. If the exercise is directed toward the solution of a problem, make note of the problem, indicating improvements which you think might be made in the form of statement.

4. Cite as many instances as you can of analysis, sifting and arranging of data, association, comparison, etc. How far are pupils stimulated to return to the object observed for verification of observations made?

5. To what extent are causal relations developed? Relations of the physical environment to human welfare?

6. To what extent does the exercise afford training in scientific method?

7. Evaluate the exercise from the standpoint of its tendency to foster the inquiring attitude toward things in nature.

8. What has the school in the way of an elementary science laboratory or museum?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Coulter, Coulter & Patterson,—*Practical Nature Study and Elementary Agriculture*, 50-59; 120-152 [Ap.]
(b) Freeman,—*Psychology of the Common Branches*, X. [H. Mif.]
(c) Twiss,—*Principles of Science Teaching*, IV. [Mac.]
(d) Trafton,—*The Teaching of Science in the Elementary School*, V. [H. Mif.]
(e) Lloyd & Bigelow,—*The Teacking of Biology*, 44-61. [Long.]
(f) McMurry,—*Special Method in Elementary Science*, 91-125. [Mac.]
(g) Rapeer,—*Teaching Elementary School Subjects*, 344-346. [Scr.]

EXERCISE XXI

General Topic: Making Physiology Concrete.

Observation Problem: How may pupils be given realistic impressions regarding the structure and function of parts of the human body?

1. State the objective toward which the lesson is directed.

2. To what extent is instruction in structure given a character such as may be subservient to the understanding of function and hygiene?

3. Account for the conditions appearing in the class as regards the motive with which pupils work.

4. What seem to be the effects coming from any experiment or demonstration showing the nature of bodily processes?

5. To what extent is comparison made use of as between human organs or parts and corresponding organs or parts of lower animal forms which may have been observed in nature study?

6. Describe the effects of any direct objective illustration taking place, particularly if it involves dissection

7. In what respects is the instruction related to physical education, or physical culture?

8. Give, if possible, one instance of each of the following types of mental acquirement on the part of pupils: (a) percept, (b) concept, (c) association tendency.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Trafton,—*The Teaching of Science in the Elementary School*, XV. [H. Mif.]
(b) Rapeer,—*Teaching Elementary School Subjects*, 393-396; 402-406; 420-425. [Scr.]
(c) Charters,—*Teaching the Common Branches*, XIII. [H. Mif.]
(d) Betts,—*Classroom Method and Management*, XVII. [Bo. M.]

EXERCISE XXII

General Topic: Personal and Public Hygiene.

Observation Problem: What are the essential aspects of good teaching of hygiene?

1. Are the data employed in the lesson drawn from present observation, past experiences, or books and other literature consulted?

2. Cite evidences indicating possession or lack of clear ideas regarding features of subject-matter which are used? What means are employed for giving clearness or vividness to pupils' ideas of things?

3. What use, if any, is made of data drawn from a sanitary survey of the community, made by pupils or any other agency?

4. Record instances of the application of physiological knowledge in promoting hygienic instruction or behavior.

5. What insanitary or unhygienic conditions do you see in the school room, among pupils, or in the immediate vicinity of the school in relation to which some group responsibility should be developed? What reasons indicate attention to this in the course of instruction, or neglect of it?

6. To what extent do pupils raise questions of fact or policy regarding the subject in hand?

7. What features of the lesson seem to you likely to prove effective in influencing pupils toward right behavior as regards personal or public hygiene? What evidence do you gather indicating whether or not past instruction in hygiene is functioning?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Andress,—*Health Education in Rural Schools*, I & III. [H. Mif.]
(b) Groszmann,—*The Career of the Child*, IV. [Badg.]
(c) Kendall & Mirick,—*How to Teach the Fundamental Subjects*, V. [H. Mif].
(d) Trafton,—*The Teaching of Science in the Elementary School*, XIV. [H. Mif.]
(e) Rapeer,—*Teaching Elementary School Subjects*, 396-402; 406-416. [Scr.]
(f) Rapeer,—*Educational Hygiene*, XXV. [Scr.]
(g) Barry,—*The Hygiene of the Schoolroom*. [Sil. B.]
(h) Pyle,—*Personal Hygiene*. [Saun.]
(i) Bancroft,—*The Posture of School Children*. [Mac.]

EXERISE XXIII

General Topic: Realistic Presentation of Geography Material.

Observation Problem: How may pupils be brought into possession of realistic impressions regarding geographical conditions?

1. If the lesson is based on a geography excursion, find out and tell how the teacher prepared for the trip and how it was conducted. What is done in the exercise observed by way of realizing the utmost of results?

2. If a type study is being carried on, give your judgment in accordance with question 2, Exercise XX, as to the wisdom exercised in its selection.

3. Has the teacher made proper preparation as respects illustrative material to be used, or is time wasted in bringing it into use?

4. If stereoscopic or stereopticon views or the cinematograph is used, tell with what effects as regards clearness of ideas, interest, and economy of learning.

5. How, if in any way, does the teacher insure against misinterpretation of material presented?

6. If you think the teacher talks excessively or insufficiently about things presented, tell why you think so.

7. If the lesson shows tendencies toward mere entertainment, tell in what respects.

8. What provision for expressional activities in connection with the exercise, or anywhere in the geography work, do you observe?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Sutherland.—*The Teaching of Geography*, XVII, XVIII. [S. F.]
(b) Redway.—*The New Basis of Geography*, VIII, XI. [Mac.]
(c) McMurry.—*Special Method in Geography*, 21-40; 106-110. [Mac.]
(d) McMurry.—*Excursions and Lessons in Home Geography*. [Mac.]
(e) King.—*Methods and Aids in Geography*, VII, VIII, IX. [L. L.]
(f) Dodge & Kirchwey.—*The Teaching of Geography*, VIII, XI, XVII. [Rand]
(g) Morton.—*Chalk Illustrations for Geography Classes*. [Fla.]

EXERCISE XXIV

General Topic: Locational Geography.

Observation Problem: How may pupils be properly impressed regarding important geographical locations?

1. What was the motive for talking location?

2. Make a list of the locations studied, and give your estimate of the value of knowing them.

3. To what extent does the exercise involve study of the map? What evidences of success or failure in this do you note?

4. What are your impressions regarding any use which may be made of desk or wall outline maps?

5. To what extent and with what effects are pupils required to make sketch maps from memory?

6. If distances are considered, by what means are they made realistic?

7. In what respects does the exercise meet the requirements of a drill?

8. Analyze the lesson, bringing out the main points in the teacher's plan.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) King,—*Methods and Aids in Geography*, VI, VII, XVI. [L. L.]
(b) Dodge & Kirchwey,—*The Teaching of Geography*, 11-12; X. [Rand]
(c) Sutherland,—*The Teaching of Geography*, 235-248. [S. F.]
(d) Redway,—*The New Basis of Geography*, IX, XI. [Mac.]
(e) McMurry,—*Special Method in Geography*, 131-133. [Mac.]

EXERCISE XXV

General Topic: Nature Study of the Farm.

Observation Problem: How may pupils be inducted into a suitable attitude and method of learning about materials of livelihood found on the farm?

1. What is your conception of the relation to human welfare of the subject-matter studied?

2. Does the work consist of a superficial review of book-study, or is it based upon first hand observation of things on the farm? What pedagogical effects do you note in either case?

3. If the work is related to a class excursion, either as preparation or supplemental study, note as fully as may be possible just how the excursion was conducted.

4. To what extent is reference made to classifications, keys, authorities, or generalized knowledge previously developed, for purposes of identification or explanation of things studied?

5. Observe the character of note book work which pupils are found to be doing.

6. Has the school agricultural collections of any kind? If so, what use is made of them?

7. If experimental tests of any kind are made, criticize them as to (a) clearness, (b) simplification, and (c) application.

8. Explain conditions as regards eagerness on the part of pupils to know and do in connection with the exercise.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Coulter, Coulter and Patterson,—*Practical Nature Study and Elementary Agriculture,* I, IX, X. [Ap.]
(b) Needham,—*The Natural History of the Farm.* [Com.]
(c) Betts,—*Classroom Method and Management,* XIX. [Bo. M.]
(d) Trafton,—*The Teaching of Science in the Elementary School,* VI, XI. [H. Mif.]
(e) Rapeer,—*Teaching Elementary School Subjects,* 375-379. [Scr.]
(f) Hodge,—*Nature Study and Life.* [Ginn]
(g) Nolan,—*The Teaching of Agriculture,* II. [H. Mif.]

EXERCISE XXVI

General Topic: The "Problem" in Agriculture.

Observation Problem: How is a problem lesson in agriculture conducted?

1. Quote the problem used and give your judgment regarding (a) its adaptedness; (b) its utility; and (c) the form in which it is stated.

2. From what sources are the data drawn which are used? In cases of recall of needed data, tell how such recall is prompted.

3. In what ways is the relevancy or irrelevancy of data shown?

4. What influences do you note in the course of the exercise tending toward development of pupils' dependence upon themselves?

5. Point out instances, if they occur, of "intelligent guessing" properly followed by verification.

6. If the problem constitutes a group project, describe its workings.

7. In case the conclusion of the lesson is reached, tell whether it is properly rounded out, and why you think so.

8. To what extent and with what effects are statistics used in the lesson?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Charters,—*Teaching the Common Branches,* XIV. [H. Mif.]
(b) Coulter, Coulter & Patterson,—*Practical Nature Study and Elementary Agriculture,* 125-152. [Ap.]
(c) Rapeer,—*Teaching Elementary School Subjects,* 380-391. [Scr.]
(d) Nolan,—*The Teaching of Agriculture,* 107-140. [H. Mif.]
(e) Hunter,—*Laboratory Problems in Civic Biology.* [A. B. C.]

EXERCISE XXVII

General Topic: Learning New Words in Reading.

Observation Problem: What are the phases of learning involved in a child's mastery of word symbols?

1. To what extent is the child familiar with the idea for which the word stands? How does the teacher help toward giving this idea fullness and vividness?

2. In what ways specifically does the teacher promote thoroughness in the children's learning of new word symbols?

3. To what extent are special aids, such as rime, motion, pictures, pantomime, or plays used to intensify the impression in learning new words?

4. How are phonic drills used in relation to the learning of new words? Spelling?

5. To what extent does the lesson involve grasp and interpretation of speech units larger than words, as phrases or complete sentences?

6. If perception cards are used, tell to what purpose.

7. Note the plan and effectiveness of any drill in quickness of recognition or correctness of enunciation of words.

8. Give instances in which the context is used, or might be used, as an aid in the identification of words.

9. What seems to be the effect of such use of writing as appears in connection with the learning of new words?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Gray,—*Principles of Method in Teaching Reading, Eighteenth Yearbook, N. S. S. E.*, 26-38. [P. S.]
(b) Freeman,—*Psychology of the Common Branches*, 67-88. [H. Mif.]
(c) Klapper,—*Teaching Children to Read*, I, III. [Ap.]
(d) Taylor,—*Principles and Methods of Teaching Reading*, 12-38. [Mac.]
(e) Briggs & Coffman,—*Reading in Public Schools*, IV, V, VIII. [R. P.]
(f) Sawyer,—*Five Messages to Teachers of Primary Reading, Message One, and Message Three.* [Rand]
(g) McMurry,—*Special Method in Reading for the Grades*, 119-122. [Mac.]

EXERCISE XXVIII

General Topic: The Relation of Phonics to Successful Reading.

Observation Problem: In what ways does mastery of phonics affect the success of pupils in learning to read?

1. How far would you justify the proportions of the lesson as between instruction and training or drill?

2. Describe the method or methods employed in presenting elementary sound symbols?

3. How are pupils taught correct utterance of elementary sounds?

4. To what extent do you observe training in euphony and precision of pronunciation of complete words?

5. Give instances of analysis of words into their sound elements or synthesis of the spoken word. What relation does this seem to bear to correct speech?

6. Note instances of halting reading and try to determine whether the cause lies in slow recognition of word symbols or lack of motor control in utterance. (See Huey,—*Psychology and Pedagogy of Reading,* 348-353.)

7. What devices are employed to give zest to the drill? Variety?

8. Give instances showing how mastery of phonics aids toward independence in reading.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Klapper,—*Teaching Children to Read,* VIII. [Ap.]
(b) Briggs & Coffman,—*Reading in Public Schools,* IX. [R. P.]
(c) Taylor,—*Principles and Methods of Teaching Reading,* 77-85; 120-128. [Mac.]
(d) Gray,—*Principles of Method in Reading, Eighteenth Yearbook, N. S. S. E.,* 32-34. [P. S.]
(e) Lewis,—*American Speech,* III. [S. F.]
(f) O'Shea,—*Linguistic Development and Education,* 186-191. [Mac.]
(g) Sherman & Reed,—*Essentials of Teaching Reading,* XIV. [Univ.]

EXERCISE XXIX

General Topic: Training in Thought-Getting.

Observation Problem: What are the most important ways of helping pupils to get thought contained in reading matter?

1. What evidences do you see indicating that the selection read does, or does not, make a proper appeal to the interest of the pupils?

2. What variations do you observe in the size of the unit of material upon which the attack of pupils is directed? Tell of the effects?

3. What directions or other forms of stimulus are employed by the teacher to bring about vigor of attack?

4. What are the effects of re-reading as a thought-getting measure?

5. How are pupils stimulated to bring to bear recalled experience and to use other forms of mental association?

6. Criticize the teacher's questioning for meaning.

7. To what extent is analytical study of passages entered into, involving application of technicalities of grammar, interpretation of allusions or figures of speech, or use of the dictionary?

8. Give your impressions regarding any use which may be made of pictures, maps, gesture, impersonation, or other devices tending to hold the attention or stimulate the imagination of pupils.

9. What effects do you note coming from pupils' restating the author's thought, making of synopses, and the like?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Taylor,—*Principles and Methods of Teaching Reading,* 129-141. [Mac.]
(b) Klapper,—*Teaching Children to Read,* IV. [Ap.]
(c) Briggs & Coffman,—*Reading in Public Schools,* VII, XVII, XXII, XXIII, XXIV. [R. P.]
(d) McMurry,—*Special Method in Reading for the Grades,* 119-122; 245-258. [Mac.]
(e) Gray,—*Principles of Method in Teaching Reading, Eighteenth Yearbook, N. S. S. E.,* 38-43. [P. S.]
(f) Hinsdale,—*Teaching the Language Arts,* XIII. [Ap.]
(g) Bates,—*The Study of Literature,* VII. [H. Mif.]
(h) O'Shea,—*Linguistic Development and Education,* IX. [Mac.]

EXERCISE XXX

General Topic: Expressional Reading.

Observation Problem: What are the most successful ways of training pupils toward good oral reading?

1. By whom has the material which is read been selected, by the teacher or by the pupils? What is the effect upon interest in either case?

2. Was the motive for the reading observed a real one? What conditions tend to make or mar the desired audience situation?

3. What means are employed for stimulating a state of feeling in the reader that is akin to that of the author in writing?

4. What pedagogical values appear in prepared reading, in so far as it appears, that would not obtain in reading at sight; and vice versa?

5. What reasons appear for considering that pupils read for either too long or too short a time?

6. Give your impressions, with reasons, concerning the nature of criticisms offered.

7. What better means than example and imitation does the teacher use in securing expression?

8. What help, either preliminary or subsequent to reading efforts, is given on difficult words or combinations of words?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Briggs & Coffman,—*Reading in Public Schools,* VI, X. [R. P.]
(b) Taylor,—*Principles and Methods of Teaching Reading,* 141-164. [Mac.]
(c) Klapper,—*Teaching Children to Read,* 141-151. [Ap.]
(d) McMurry,—*Special Method in Reading for the Grades,* 122-128; 257-270. [Mac.]
(e) Clark,—*How to Teach Reading,* XVI. [S. F.]
(f) Sherman & Reed,—*Essentials of Teaching Reading,* I-XII, XVII. [Univ.]

EXERCISE XXXI

General Topic: Appreciation of a Literary Classic.

Observation Problem: What can be done in the reading class toward developing desirable present and permanent interests in literature?

1. Tell why, or why not, you consider the selection used a literary classic. If it is not a classic, justify its use.

2. What are the indications as regards the adequacy of conception on the part of pupils, of the setting, if the piece is narrative, or of the point of view if it is description, exposition, or argument?

3. Is the selection read throughout in class, or is it read wholly or partially out of class? What reasons do you see for change in the proportion read in class?

4. If the piece is read only partially in class, what are the indications regarding whether pupils have read sufficiently out of class to keep up the connection, and with proper motive?

5. Note the effects of the teacher's own interest in the selection read.

6. What seems to be the relation of effort to get the meaning to enjoyment of the piece? What features of method tend to promote or prevent enjoyment?

7. What results seem to come from analytical study of words, grammatical structure, allusions, etc.?

8. What attention is given to the plot or plan as a whole? With what effects?

9. What ways appear in the exercise of stimulating voluntary independent reading? Good choices in such reading?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) McMurry,—*Special Method in Reading for the Grades,* X. [Mac.]
(b) Chubb,—*The Teaching of English,* VII, X. [Mac.]
(c) Klapper,—*Teaching Children to Read,* X. [Ap.]
(d) Briggs & Coffman,—*Reading in Public Schools,* XVIII. [R. P.]
(e) Cox,—*Literature in the Common Schools,* 89-127. [L. B.]
(f) Bates,—*The Study of Literature,* VI. [H. Mif.]
(g) Bolenius,—*Teaching Literature in the Grammar Grades and High School.* [H. Mif.]

EXERCISE XXXII

General Topic: Training in Spelling.

Observation Problem: What are the essentials of a good spelling exercise?

1. Find out the source of the list of words used. What proportion is found in a standard list such as Ayres's, Jones's, or Cook & O'Shea's?

2. If the lesson involves assignment of words to be studied, note the adequacy of attention given to: (a) initial focalization of attention; (b) anticipation of difficulties; (c) pronunciation; (d) syllabication; (e) visualization; (f) meaning.

3. Note mistakes which seem to come from motor incoördination, "slips of the pen," rather than from actual inability to spell the words.

4. Wherein does the method employed comply, or fail to comply, with Josts's law of association? (See Rapeer, 73.)

5. Do the pupils keep individual lists of troublesome words? If so, what use do they make of them?

6. Estimate the proportion of time devoted to *instruction* in spelling as against mere *testing*.

7. Cite instances showing whether or not time is wasted through poorly established routine.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Horn,—*Principles of Method in Teaching Spelling, Eighteenth Yearbook, N. S. S. E.*, III. [P. S.]
(b) Wallin,—*Spelling Efficiency*, 1-25; 77-84. [W. & Y.]
(c) Burnham,—*Hygiene and Psychology of Spelling. Ped. Sem.*, XIII, 481-489. [Ped. S.]
(d) Charters,—*Teaching the Common Branches*, 10-25. [H. Mif.]
(e) Rapeer, et al.,—*Teaching Elementary School Subjects*, 58-77. [Scr.]
(f) Kendall and Mirick,—*How to Teach the Fundamental Subjects*, 122-144. [H. Mif.]
(g) Hicks,—*Champion Spelling Book, Suggestions to Teachers.* [A. B. C.]
(h) Cook & O'Shea,—*The Child and His Spelling*, XIV. [Bo. M.]
(i) Hollingworth,—*The Psychology of Special Disability in Spelling.* [Bo. M.]

EXERCISE XXXIII

General Topic: The Motivation of Expression.

Observation Problem: How can pupils be worked up to the point of really wanting to express their ideas?

1. What is the aim of the lesson observed?

2. What type of method is employed? Is the method appropriate?

3. Criticize the selection of subject-matter from the standpoint: (a) of its adaptation inherently to the interests and life needs of the children; (b) of its appropriateness to the lesson aim.

4. To what extent does the vitalization of subject-matter flow from the personality of the teacher? From the spiritedness of the teaching?

5. Report occurrences showing the relation of past experience to the vividness of ideas.

6. What instinctive or emotional tendencies in pupils are made use of in the motivation of expression?

7. Note the physical attitude and motor activities in relation to expression. Are they cause or effect? Give illustrations.

8. Make note of motor aids to expression employed by pupils—gestures, attitudes, facial expression, etc.

9. To what extent do the pupils appear to be influenced by a sense of the ultimate life values of powers of expression?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Wilson & Wilson,—*Motivation of School Work,* II, VI. [H. Mif.]
(b) Charters,—*Methods of Teaching,* VIII, X, Sec. 1. [R. P.]
(c) Charters,—*Teaching the Common Branches,* XVI; 51-62. [H. Mif.]
(d) Dewey,—*Interest and Effort,* III. [H. Mif.]
(e) Campagnac,—Teaching of Composition, III. [H. Mif.]

EXERCISE XXXIV

General Topic: Picture Study as a Basis of Composition.

Observation Problem: How to stimulate appreciation of a great painting.

1. Evaluate the picture used from the standpoint of: (a) its adaptation; (b) its mechanical fitness. Is it an original or a good copy?

2. Do the pupils have individual copies, or do all view the same one? What advantages or disadvantages in this do you see?

3. Note the pupils individually as to relative ability to contemplate the picture as against merely seeing striking details.

4. To what extent, and with what effects, does the teacher draw attention to details of the picture? To principles of art involved?

5. To what extent is knowledge material introduced relating to the author and the painting? Is it really advantageous?

6. Does the teacher's treatment of the subject tend toward intellectual interests, or is it such as to awaken emotional responses mainly?

7. In what ways does the lesson tend toward taste in the choice of pictures? In the use of language?

8. Does the treatment apparently result in a deeper appreciation of the picture on the part of the pupils, and a greater liking for it? If so, what produces this effect?

9. Record such evidences as you see of pupils' enjoyment of the lesson.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) McMurry et al.,—*Public School Methods,* III, 301-302; IV, 349-352. [S. M. C.]
(b) Stimson,—*The Gate Beautiful,* V, VI. [Br.]
(c) Van Dyke,—*How to Judge of a Picture,* V. [Ea.]
(d) Holborn,—*The Need for Art in Life,* V. [Shaw.]
(e) Caffin,—*Art for Life's Sake.* [Prang]

EXERCISE XXXV

General Topic: Training in Observation and Enunciation of Words.

Observation Problem: How can right habits be established in the observation and enunciation of words?

1. What is the specific aim of the lesson? What developments indicate consciousness of a definite aim on the part of both teacher and pupils?

2. Criticize the selection of words for study from the standpoint of: (a) their value in themselves; (b) their typical character.

3. In what ways does the teacher bring about analytical observation of the words?

4. Are time and effort properly apportioned between parts of words that are comparatively familiar and easy, and those that are unfamiliar and difficult?

5. What individual differences do you observe in pupils as regards accuracy and precision of utterance? Is due attention given to individual difficulties?

6. Do pupils learn how to utter a sound or combination of sounds as the result of specific instruction in phonetics on the part of the teacher, or by trial and error imitation?

7. Is there concentration of mind on the part of pupils? Do they enjoy the exercise?

8. Are exceptions from the correct enunciation permitted?

9. Was the aim achieved? Could the pupils themselves tell whether or not they have learned the correct utterance of words studied?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) James,—*Talks to Teachers,* VIII. [Holt]
(b) Lewis,—*American Speech,* 9-52. [S. F.]

EXERCISE XXXVI

General Topic: Training in English Usages.

Observation Problem: How can we further right habits in pupils in their use of the English language?

1. By what has the teacher been guided in making her selection of forms for treatment in the exercise? In what respects do you find the selection well made, or otherwise?

2. How does the group determine what forms are right? Note particularly independent judgment as against custom imitation.

3. What observations are you able to make of the functioning of grammar in determining right language forms?

4. Are "rules of syntax" employed? Criticize their use.

5. Of what importance is understanding the reason for a right form before drill in it is begun?

6. To what extent are the correct forms used in the exercise already habitual in the usages of individual children? How does the teacher treat these individual differences?

7. Is the drill carried on in concert or individually? If both methods are used, compare them in effectiveness.

8. Applying the criteria of the school drill, make a general estimate of the value of the exercise observed. (See Strayer,—*The Teaching Process,* IV; Earhart,—*Types of Teaching,* XII; Rowe,—*Habit Formation and the Science of Teaching,* XIII.)

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Bagley,—*Classroom Management,* 15-16. [Mac.]
(b) O'Shea,—*Linguistic Development and Education,* V. [Mac.]
(c) Charters,—*Teaching the Common Branches,* 68-69. [H. Mif.]
(d) Kendall & Mirick,—*How to Teach the Fundamental Subjects,* 60-68. [H. Mif.]
(e) Brewer,—*Oral English, 72-76.* [Ginn]
(f) Cooley,—*Language Teaching in the Grades,* V. [H. Mif.]
(g) Bolenius,—*The Teaching of Oral English.* [Lip.]

EXERCISE XXXVII

General Topic: Oral Composition in Story Telling.

Observation Problem: What are the most effective factors in helping a child to tell a story well?

1. What was the source of the content of the story? If supplied by the teacher or selected from literature by the pupil, criticize it from the standpoint of literary structure.

2. Do all pupils tell the same story? How does this phase of the exercise affect their interest in it?

3. As individual pupils tell their stories, is the audience situation such as to give adequate motive to the telling?

4. What appears in the exercise which seems to you to tend toward relieving or increasing the self-consciousness of the story teller?

5. Is attention given in the teaching mainly to getting the content properly connected or the language in proper form?

6. Note specific language usages that receive attention, and tell how they were treated.

7. Note the influence of individual tastes upon facility and finish of expression. What is done toward cultivation of taste?

8. Take account of occurrences indicating the advantage of habituated good usage over good usage accomplished through exercise of judgment.

9. Did the pupils enjoy the lesson? How did the teacher's personality affect the case in this regard?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Charters,—*Teaching the Common Branches,* 51-62. [H. Mif.]
(b) Rapeer,—*Teaching Elementary School Subjects,* 114-120. [Scr.]
(c) Kendall & Mirick,—*How to Teach the Fundamental Subjects,* 74-83. [H. Mif.]
(d) Carpenter, Baker & Scott,—*The Teaching of English,* 124-129. [Long.]
(e) Chubb,—*The Teaching of English,* 106-110; 173-182. [Mac.]
(f) McMurry, et al.,—*Public School Methods,* III, 282-283. [S. M. C.]

EXERCISE XXXVIII

General Topic; The "Literary Model" in Composition.

Observation Problem: How can an English classic be made to serve for guidance in English composition?

1. What considerations should govern in the selection of a classic to be used as a "literary model"? Criticize the selection the use of which you observe.

2. How does the use of the classic as a "model" affect pupils' interest in the piece itself? Upon what do you base your judgment?

3. What influence does the classic seem to have upon the pupils' disposition to speak or write? Is admiration in evidence; inspiration; or discouragement? Cite specific instances as far as possible.

4. To what extent and by what means does the teacher make the classic influence pupils' choice of right forms of words and sentences?

5. Record instances of "fine writing" which you see on the part of pupils.

6. Note the point of questions asked by the teacher, and tell whether or not they are to good purpose.

7. Is the work adapted to the class?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Cooley,—*Language Teaching in the Grades.* [H. Mif.]
(b) Carpenter, Baker & Scott,—*The Teaching of English,* 135 ff. [Long.]
(c) Chubb,—*Teaching of English,* 185, 196, 203, 229-230. [Mac.]
(d) O'Shea,—*Linguistic Development and Education,* 246-253. [Mac.]

EXERCISE XXXIX

General Topic: Organization of a Theme.

Observation Problem: What are the essential steps in the organization of material into a theme?

1. Is the subject well chosen? Why?

2. Do the pupils seem to be in possession of an adequate stock of ideas? Are they the result of casual experience, independent investigation, or investigation under the guidance of the teacher?

3. Is the general plan of the theme as preconceived by the teacher, or is it worked out on the initiative of the class?

4. Is there freedom of inquiry, suggestion, and discussion? Cite illustrations.

5. If a written outline is developed, tell whether it is sufficiently detailed.

6. Are practicable suggestions of pupils freely made use of? Who really decides what shall go into the class theme?

7. Is the recording of the outline as developed expedited so as not to interfere unduly with pupils' thinking?

8. Do the pupils participate perfunctorily, or do they find real interest in the exercise? What are your evidences?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Chubb,—*The Teaching of English,* 113-116; 174-176. [Mac.]
(b) Carpenter, Baker & Scott,—*The Teaching of English,* 130-135. [Long.]
(c) Hinsdale,—*Teaching the Language Arts,* 120-125. [Ap.]
(d) Charters,—*Teaching the Common Branches,* 63-67. [H. Mif.]
(e) Perry,—*Problems of the Elementary School,* 85-88. [Ap.]

EXERCISE XL

General Topic: Development of a Grammatical Principle.

Observation Problem: How may a technical relation in English grammar be presented to best advantage?

1. Note particularly what the teacher does preliminary to the presentation of the substance of the lesson. Give reasons for or against these preliminaries.

2. As the lesson proceeds, make a careful record of features that might have been eliminated, or points that in your judgment might have been introduced to good purpose.

3. Note one or more instances of application of the principle of apperception.

4. Criticize as to clearness the presentation of the data upon which the inference depends.

5. Are pupils helped in arriving at the generalization by re-comparison of the examples given, increasing the number of examples, leading questions, or direct telling?

6. What proportion of the class really *discover* the generalization? How do you determine this?

7. Are the five formal steps in evidence? Try to reduce the lesson process observed to three steps.

8. Compare the interest of the class with what it probably would have been if a different type of method had been employed.

9. How completely did the teacher accomplish the lesson aim?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Charters,—*Teaching the Common Branches,* 92-96. [H. Mif.]
(b) Barbour,—*The Teaching of English Grammar,* 53-57. [Ginn]
(c) Chubb,—*The Teaching of English,* 220-221. [Mac.]
(d) Rapeer,—*Teaching Elementary School Subjects,* 144-147. [Scr.]
(e) Kendall and Mirick,—*How to Teach the Fundamental Subjects,* 118-120. [H. Mif.]
(f) Carpenter, Baker and Scott,—*The Teaching of English,* 198-201. [Long.]

EXERCISE XLI

General Topic: The Use of Grammatical Principles

Observation Problem: How may pupils be most advantageously taught to interpret or explain a given grammatical construction?

1. What evidences seem to indicate that the constructions to be explained are or are not of reasonable difficulty?

2. Note questions which the teacher asks, or other means she employs, of stimulating analytical thought.

3. By what means do individual pupils seem to get mental hold of the grammatical principle applying to constructions studied?

4. Record the best illustration you see showing the play of mental association in thinking; dependence upon memory.

5. Report one or more instances of pupils' reasoning from one concrete to another.

6. Is the problem situation definitely created in the teaching, and with what effects, particularly as to interest?

7. Try to organize the process observed on the basis of teaching steps. (See Bagley,—*The Educative Process,* 308-309; Strayer,—*Teaching Process,* 74-76.)

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Ward,—*What Is English?* IV, V. [S. F.]
(b) Barbour,—*The Teaching of English Grammar,* 58-61. [Ginn]
(c) Charters,—*Teaching the Common Branches,* 97-99. [H. Mif.]
(d) Rapeer et al.,—*Teaching Elementary School Subjects,* 147-148. [Scr.]
(e) Chubb,—*The Teaching of English,* 214. [Mac.]

EXERCISE XLII

General Topic: Teaching a New Process in Arithmetic.

Observation Problem: What features of method tend toward making most vivid to pupils a new process in arithmetic?

1. How far, in your judgment, is the new process observed normal to the life of the children to whom it is presented; that is, how far suited to their interests, powers, and needs?

2. Mention two or three of the best things that are done to the end of giving pupils adequate motive toward learning the new process.

3. Is the process in its first presentation thought out or developed by the class, or is it rationalized by repeating its use? What points of superiority in either method?

4. Give instances of deductive reasoning that occur incidentally to the general inductive process.

5. Point out the major inductive inference.

6. Report questions asked by the teacher that are particularly well put, and others that you regard as irrelevant, confusing, or otherwise seriously at fault.

7. Was the lesson so conducted as to bring about "discovery" on the part of pupils? What emotional effects seem to come from this?

8. Analyze the lesson on the basis of the three necessary steps of the inductive process. (See Dewey,—*How We Think*, 207-213.)

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Stamper,—*A Text Book on the Teaching of Arithmetic*, 25-26. [A. B. C.]
(b) Young,—*The Teaching of Mathematics*, 57-58. [Long.]
(c) Kendall & Mirick,—*How to Teach the Fundamental Subjects*, 186-189. [H. Mif.]
(d) McMurry,—*Special Method in Arithmetic*, IV. [Mac.]
(e) Lindquist,—*Modern Arithmetic Methods and Problems*, X; 115-118; 131-136. [S. F.]

EXERCISE XLIII

General Topic: Teaching a New Arithmetical Principle.

Observation Problem: How can pupils be led to discover for themselves an important arithmetical principle?

1. Does the teacher establish the necessary apperceptive basis by stimulating pupils' recall of past experience, or by directly presenting a review of the material needed? In case both methods are employed, which seems to you to be superior?

2. Are several examples presented before comparison is begun, or is each new example compared as given with previous ones? Which seems to you the better way?

3. Are the examples well chosen from the standpoint: (a) of their difficulty, (b) of their exemplification of the generalization toward which the class is working?

4. What is your judgment as regards the sufficiency of the number of examples used? Give reasons.

5. How large a percentage of the class seem to make the inference as a matter of discovery on their own part rather than being told?

6. Cite one or more instances each of pronouncedly clear or confused thinking.

7. What conditions arising during the progress of the exercise tend to quicken or suppress interest?

8. Analyze the lesson on the basis of the three necessary steps of the inductive process.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Bailey,—*A Handy Book on Teaching Arithmetic,* 14-15. [Ba.]
(b) Charters,—*Teaching the Common Branches,* 284. [H. Mif.]
(c) McMurry,—*Special Method in Arithmetic,* 36-37; 155-165. [Mac.]

EXERCISE XLIV

General Topic: The Use of Arithmetical Principles.

Observation Problem: How can pupils be shown the use of arithmetical principles as means of unfolding the solution of problems?

1. Is the source of the problems, books, or actual life situations?

2. How are the data necessary to the solution of the problem got before the class? With what degree of satisfaction to the observer is this done?

3. How do the pupils arrive at the principle which is applicable? Does a process of elimination ensue, or is the right principle intentionally or unconsciously suggested by the teacher?

4. What percent of the class seem really to reason the problems through?

5. Convert one or more of the deductive processes of thought into the form of the syllogism.

6. Cite instances showing how pupils are led to re-examine inferences which they have made for the sake of revealing their validity or invalidity.

7. Does verification of any part or the whole of a process take place; and with what results?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Bagley,—*The Educative Process*, XX. [Mac.]
(b) Charters,—*Methods of Teaching*, 188-189. [R. P.]
(c) Brown and Coffman,—*How to Teach Arithmetic*, 357-358. [R. P.]
(d) Stamper,—*A Text Book on the Teaching of Arithmetic*, 23-25. [A. B. C.]

EXERCISE XLV

General Topic: Method of Attack of Arithmetic Problems.

Observation Problem: How should pupils be taught to attack the problem in arithmetic?

1. Are the problems used normal to the life and adapted to the maturity of the class? What is the source from which they come?

2. How does the teacher induce careful reading of the problem? Is detailed analysis required by way of bringing out very clearly the data given as opposed to what is to be found?

3. Observe closely and record instances showing the play of association in bringing to bear upon the problem the right arithmetical principle.

4. How does the teacher aid in this,—by hint, comparison, leading question, or otherwise?

5. Record such evidences as you see indicating that pupils are or are not clear in their understanding of principles applied in the solution of problems.

6. Report your memoranda of objectionable questions asked by the teacher, with reasons for your objection to them.

7. Do pupils ask questions as they should? Why?

8. Resolve the lesson into definite method steps.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Charters,—*Teaching the Common Branches,* 286-290. [H. Mif.]
(b) McMurry,—*Special Method in Arithmetic,* 128-135. [Mac.]
(c) Brown and Coffman,—*How to Teach Arithmetic,* 357-358. [R. P.]
(d) Stamper,—*A Text-Book on the Teaching of Arithmetic,* 128-130. [A. B. C.]
(e) Lindquist,—*Modern Arithmetic Methods and Problems,* VI. [S. F.]

EXERCISE XLVI

General Topic: Thought Training in Arithmetic.

Observation Problem: To find acceptable special ways of stimulating close, discriminative thinking in the solution of arithmetic problems.

1. Are the problems used adapted to the class as regards difficulty? Are they in themselves worth while?

2. In what respects, if at all, are the types of training employed in this exercise superior to that afforded by the solution of problems in the ordinary way?

3. Is training given in finding the shortest way to an approximation?

4. Are similar processes of thought repeated; or does each exercise call for a type of thinking that is different from the rest? Which would you regard as the better?

5. Is it evident that pupils appreciate the practical utility of approximating or forecasting results? How do you judge as to this?

6. Try to determine in the case of individual pupils whether their principal need is training in the processes of thought involved in the problems or in the computations that have to be employed.

7. Do the pupils seem to enjoy the exercises? Why?

8. What type of method predominates in the exercise?

9. What special values do you see in the use of problems without numbers?

10. What special values in chain problems? Do they seem to involve mental over-strain?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Charters,—*Teaching the Common Branches*, 289. [H. Mif.]
(b) Brown and Coffman,—*How to Teach Arithmetic*, 63; 207-208; 95-98. [R. P.]
(c) Stamper,—*A Text-Book on the Teaching of Arithmetic*, 96-97; 128. [A. B. C.]
(d) Walsh,—*Methods in Arithmetic*, 26-28. [Hea.]
(e) Lindquist,—*Modern Arithmetic Methods and Problems*, 69. [S. F.]

EXERCISE XLVII

General Topic: Speed and Accuracy in Arithmetic.

Observation Problem: What are the best ways of promoting speed and accuracy in arithmetic work?

1. Are the processes practiced clearly understood by the pupils? What relation does this bear to the success of the exercise?

2. Are they more or less complicated than they should be? Are they useful?

3. What means of giving motive to the exercise are employed? Suggest useful ones that did not appear.

4. Were the component parts of complex processes drilled on separately, or were they all taken in their entirety?

5. To what extent is the efficiency of the exercise lowered by differences of ability in pupils? Are the quick ones made to wait or the slow ones discouraged?

6. Are brighter pupils used as monitors; is the class divided into groups; or is any other special procedure adopted to meet differences of ability? If so, describe it.

7. Point out instances of instruction on the part of the teacher as to mode of attack, elimination of unnecessary movements, substitution of direct for indirect ideational connections, or other helps to efficiency in work.

8. Estimate the degree to which the class has attained automatism in the operations practiced.

9. Are scientifically developed arithmetic tests (Stone, Courtis, Studebaker, Kelley, Woody, etc.) used in the school? Note any effects seeming to come from the presence or absence of these.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Monroe,—*Principles of Method in Teaching Arithmetic, Eighteenth Yearbook, N. S. S. E.*, IV. [P. S.]
(b) Brown and Coffman,—*How to Teach Arithmetic*, VIII; 157-158. [R. P.]
(c) Charters,—*Teaching the Common Branches*, 290-292. [H. Mif.]
(d) McMurry,—*Special Method in Arithmetic*, 125-128. [Mac.]
(e) Suzzallo,—*The Teaching of Primary Arithmetic*, 81-82. [H. Mif.]
(f) Young,—*The Teaching of Mathematics*, 214-216. [Long.]
(g) Lindquist,—*Modern Arithmetic Methods and Problems*, VII. [S. F.]

EXERCISE XLVIII

General Topic: Speed and Accuracy in Arithmetic—(Continued).

Observation Problem: What are the best ways of promoting speed and accuracy in arithmetic work?

1. Is the subject-matter used in the exercise well chosen? How do you determine this?

2. How much time is spent in rationalization of processes? Is there any drill in processes apparently not previously rationalized? Give reasons why this is or is not justifiable.

3. Does the teacher give in sufficient measure special instruction as to ways of overcoming difficulties in the way of attainment of the ends of the exercise? Is time wasted in this?

4. What variations in the nature of the drill appear? Why should there be variations?

5. Is the drill snappy and quick? How does the teacher "speed up" the exercise?

6. Are short cuts introduced in the material used? How do these affect the interest of pupils?

7. Mark the members of the class in percents as regards the degree of automatism they exhibit in the exercises practiced; and compare the three highest with the three lowest.

8. Are any data taken by the teacher in the nature of measurement of the progress of the class? What means, if any, is employed whereby pupils are enabled to measure their own progress?

9. How long is each part of the exercise continued? Record any signs of fatigue that you observe. (See Groszmann,—*The Career of the Child*, 71.)

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(See Exercise XLVII.)

EXERCISE XLIX

General Topic: The Use of the Story in History Teaching.

Observation Problem: How may the history story be used most effectively in the teaching of history?

1. What common instincts and emotions seem to be the basis of the interest taken by pupils in the exercise witnessed?

2. Show how action and climax in the structure of stories told in the exercise operate as factors producing interest. (See *Report of the Committee of Eight,* XIII.)

3. What is the success of the teacher as regards making the story real? (See *Methods of Teaching and Studying History,* 89 ff.)

4. Make note of evidences showing the effects of the personality and method of the teacher upon the interest of pupils.

5. Point out the specifically historical values appearing in the story material presented.

6. What moral effects seem manifest? Does the teacher give way unduly to moralizing? If so, what seem to be the effects?

7. Point out factors in either subject-matter or method which seem to tend strongly toward socialization of pupils.

8. After reading as extensively as you can from the references cited below, write out a succinct statement of the function of history as a subject of instruction.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) *Methods of Teaching and Studying History,* 203 ff. [Hea.]
(b) *Report of the Committee of Eight, American Historical Association, Page x.* [Mac.]
(c) Bourne,—*The Teaching of History and Civics,* V and VI. [Long.]
(d) Hall,—*Educational Problems,* Vol. II, 284 ff. [Ap.]
(e) McMurry,—*Special Method in History,* I. [Mac.]
(f) Wayland,—*How to Teach American History,* II. [Mac.]

EXERCISE L

General Topic: The Use of the Story in History Teaching—(Continued).

Observation Problem: How may the history story be used most effectively in the teaching of history?

1. Do the stories told by the children come from books, or were they previously told them by the teacher? Do they seem to be new to the audience? How does this affect the worth-whileness of telling them?

2. Cite instances showing the adequacy or inadequacy of pupils' sense of the time to which the stories relate.

3. Are questions raised as to the truthfulness of stories? How are these settled?

4. How do details in the stories seem to affect pupils' interest?

5. Does the intellectual point of view predominate in the work or the appreciational? If there is alternation between these, try to note the effects upon pupils' interest.

6. Do the stories appear to be taken haphazard, or do they relate systematically to a central principle or problem? What is done by way of making the most of these relationships?

7. Are the stories, strictly speaking, historically *representative?* If so, what do they represent? Are they type-studies in history? (See McMurry,—*Course of Study in the Eight Grades,* I, 21-52; McMurry,—*Method of the Recitation,* 34-41; 270-281; *Public School Methods,* V, 182-188; 204-315.)

8. Test one or more of the stories told on the basis of the following desirable qualities: lucidity, truth, beauty (or the opposite), novelty, action, plot, climax, suspense, vivacity, rhythm, vividness, picturesqueness.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) McMurry,—*Special Method in History,* III. [Mac.]
(b) Wayland,—*How to Teach American History,* XI, also pp. 295-301. [Mac.]
(c) Mace,—*Method in History,* 282-308. [Ginn]
(d) Hinsdale,—*How to Study and Teach History,* 54-59. [Ap.]
(e) Bliss,—*History in the Elementary Schools,* 18-24; 193-214. [A. B. C.]
(f) Bourne,—*The Teaching of History and Civics,* 54-55. [Long.]
(g) Talkington,—*How to Study and Teach History and Civics in the Grades,* 45-46. [P. S.]

EXERCISE LI

General Topic: The Biographical Story Versus the Biographical Sketch.

Observation Problem: How do pupils succeed best in making acquaintance with the lives of important historical characters?

1. Recall your own experience in learning biographical sketches. Tell why it was, or was not, worth while.

2. Find out the sources of the stories told during the course of the exercise. Are they historically valid?

3. Note the stories as they are told, and determine in each case what historical values to pupils they contain.

4. Do pupils engage in the exercise as a matter of compliance, or because of a real desire to get something which they feel will come from it to themselves, or because of a desire to give of what they have to others?

5. What evidences point to an adequacy, or inadequacy, of interest for most economic learning? How might the situation be improved in this respect?

6. Report evidences of cases of interest sufficiently developed to carry pupils to independent reading of the lives of great men and women.

7. To which does the teacher seem to give most attention, the intellectual or the appreciational aspects of the story material?

8. Estimate the probable worth of the kind of work witnessed in comparison with the learning of biographical sketches.

9. What socializing effects seem to come from the exercise?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Johnson,—*Teaching of History,* VI. [Mac.]
(b) Wayland,—*How to Teach American History,* XII. [Mac.]
(c) Hinsdale,—*How to Study and Teach History,* 30-31. [Ap.]
(d) Freeman,—*Psychology of the Common Branches,* 143-144. [H. Mif.]

EXERCISE LII

General Topic: Illustrative Material in History.

Observation Problem: What are some practical ways of making history seem real and vivid to pupils?

1. Does the material presented admit of association with the past of the locality where the exercise takes place? Is the place setting of the event or events treated of as regards locality properly presented?

2. Note generalizations in the language of pupils or the teacher which seem to you likely to result in vague conceptions. Point out instances showing the effects of illustrative material in correcting this kind of defect.

3. Point out evidences showing whether the materials used are in reality *illustrative* rather than being taken as ends in themselves.

4. Are unlabeled materials,—relics, models, pictures, maps, charts, or diagrams, presented for identification?

5. Is the blackboard used by the teacher in the course of the exercise for the presentation of a map, drawing, or sketch?

6. Record instances showing the effect of accurate details in giving the effect of vividness.

7. Find out whether there is correlation of studies in the school as between history and geography, English, drawing, or manual arts.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Johnson,—*Teaching of History,* VIII. [Mac.]
(b) Wayland,—*How to Teach American History,* XIV. [Mac.]
(c) McMurry,—*Special Method in History,* 222-238. [Mac.]
(d) Charters,—*Teaching the Common Branches,* 261-262. [H. Mif.]
(e) Bourne,—*The Teaching of History and Civics,* 157-163. [Long.]

EXERCISE LIII

General Topic: Dramatization in History.

Observation Problem: What are some practical ways of making history seem real and vivid to pupils?

1. As the acting of the dramatization proceeds, determine whether the parts and lines were developed by the pupils, or whether the play was put into the hands of the group ready made.

2. Does it seem to you an accurate portrayal of conditions, or have imagination and fancy been given free rein in the making of the scenes?

3. Note the scope of representation effected, that is, the different aspects that are portrayed of the life and times to which the play relates.

4. Record items of art experience, as seen in the costuming, stage settings, decorations, etc., by which participants are likely to profit.

5. What is your view of the exercise as a matter of training in social coöperation?

6. Was music introduced? If so, what effects do you observe? What opportunities in this line do you see that you consider to have been overlooked?

7. Is the dramatization an end in itself to the participants, or does it actually serve the purpose of making historical material seem real to them?

8. Was the exercise *efficient* from the pedagogical point of view,—that is, was the gain commensurate with the outlay of time and energy?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Chubb,—*Festivals and Plays,* XXV, XXVI. [Har.]
(b) Finlay-Johnson,—*The Dramatic Method of Teaching,* II. [Ginn]
(c) Wayland,—*How to Teach American History,* XIII. [Mac.]
(d) Wilson and Wilson,—*Motivation of School Work,* 101-127. [H. Mif.]
(e) Johnson,—*Teaching of History,* 220-221. [Mac.]

EXERCISE LIV

General Topic: Stimulating Thought and Judgment in the Study of History.

Observation Problem: How to make use of the "ifs of history," or historical anticipation, in instruction.

1. Make note of at least two principles that are made use of in explaining a situation or anticipating action.

2. What ways are devised by the teacher of helping pupils to get in mind principles that are needed?

3. Do the data which are presented appear to you to be presented in sufficient quantity, and with sufficient clearness, to constitute a satisfactory basis of judgment?

4. Record one or more instances of erroneous judgment on the part of pupils and try to account for them.

5. Does the teaching you observe bring into proper relationship these three classes of historical facts: (a) A certain condition of mind in the people; (b) an outward act or event; and (c) a resultant change in the life of the people? Show in what respects it succeeds or fails.

6. To what extent is the history of other peoples drawn upon to broaden and enrich the work in hand?

7. Make out in so far as you can the definite steps in the procedure.

8. Criticize the exercise from the standpoint of the motive with which pupils participate in it.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) DeGarmo,—*Principles of Secondary Education—Processes of Instruction*, 125-127. [Mac.]
(b) Bagley,—*The Educative Process*, 308-311. [Mac.]
(c) Hinsdale,—*How to Study and Teach History*, 104-108. [Ap.]
(d) Freeman,—*Psychology of the Common Branches*, 157-158. [H. Mif.]

EXERCISE LV

General Topic: The Problem in History Teaching.

Observation Problem: How to turn the history exercise into the form of problem-solving.

1. Is the statement of the problem clear? Is it put as from the pupils' point of view?

2. Is the problem, or the setting of the situation, such as to challenge the best efforts of pupils?

3. What does the teacher do by way of influencing pupils to evaluate data as to weight, relevancy, etc.? Note evidences of previous training on this point.

4. Furnish evidences, if they appear, showing the tendency in young people to jump to conclusions.

5. Does it seem to you that a superabundance of data is presented under a mistaken impression of their relation to thoroughness?

6. Does the exercise accomplish an actual solution of the problem? Show in what respects it succeeds or fails.

7. What are the tendencies of the method used as regards securing satisfactory attention and mental activity on the part of pupils?

8. Note the way in which the textbook is used.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Colvin,—*The Learning Process,* XXII. [Mac.]
(b) Charters,—*Teaching the Common Branches,* 253-258. [H. Mif.]
(c) Wilson and Wilson,—*The Motivation of School Work,* 127-131. [H. Mif.]
(d) Parker,—*Methods of Teaching in High Schools,* 170-205. [Ginn]
(e) Strayer,—*Brief Course in the Teaching Process,* 74-76. [Mac.]

EXERCISE LVI

General Topic: The Organization of Historical Knowledge.

Observation Problem: How to bring together the essential facts of history for permanent possession and future use.

1. Note the teacher's powers as regards vividness of narration and skill in questioning. Cite specific points showing success or failure in either.

2. How are the following incidents of instruction treated: difficult names, misconceptions on the part of pupils, geographical references, and dates?

3. Does the lesson seem to move toward establishing a mere mental catalogue of facts, or are the facts reviewed bound together by clearly conceived relationships? If the latter, are the pupils active in establishing these, or are they merely receptive of the teacher's view?

4. Cite illustrations showing the exercise of good historical judgment, or its opposite, as opportunity may be afforded.

5. Is the lesson or any part of it made to show forth a principle of social, political, industrial, or military life? If so, show how; and if not, tell in what way it might have served such an end.

6. Is the lesson carried on as an investigation leading to the solution of a problem? If so, describe the method employed; if not, tell whether it could have been so developed and briefly how.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Mace,—*Method in History*, 19-42; 64-73. [Ginn]
(b) Hinsdale,—*How to Study and Teach History*, VI. [Ap.]
(c) Hartwell,—*The Teaching of History*, 45-48. [H. Mif.]
(d) Barnes,—*Studies in Historical Method*, 100-105. [Hea.]
(e) Talkington,—*How to Study and Teach History and Civics*, III. [P. S.]
(f) Strayer,—*Brief Course in the Teaching Process*, IX. [Mac.]

EXERCISE LVII

General Topic: The Study of Community-Welfare Agencies.

Observation Problem: How to promote acquaintance with, and appreciation of, local institutions and establishments as factors in community welfare.

1. What agencies or establishments are considered in the exercise? Cite advantages or disadvantages that are determined by whether or not the institution or establishment has been visited by the class.

2. Do the pupils seem to have clear ideas of the subjects of which the exercise treats? In case they have not, how are their ideas clarified?

3. What effects do you see coming from the use of pictures, drawings, sketches, models, etc.?

4. Mention aspects of the method employed which seem to you to tend toward training in investigation.

5. Are questions asked freely by pupils? To what extent do the questions of pupils give direction to the exercise?

6. Make a list of things occurring in the exercise which seem to you of importance as giving training in citizenship.

7. In what respects does the method seem to favor a desirable attitude and interest on the part of pupils?

8. To what extent and with what effect has aid been secured from persons connected with the establishments or institutions studied, as the bankers, foremen, workmen, market men, officials, etc.?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Barnard,—*The Teaching of Civics in Elementary and Secondary Schools.* National Education Association Proceedings, 1913, 84-90. [N. E. A.]
(b) Barnard et al.,—*The Teaching of Community Civics.* U. S. Bureau of Ed. Bul., 1915, No. 23. [Bu. Ed.]
(c) Hill,—*The Teaching of Civics,* 37-108. [Bu. Ed.]
(d) Dunn,—*Civic Education in Elementary Schools*— U. S. Bureau of Ed. Bul., 1915, No. 17. [Bu. Ed.]

EXERCISE LVIII

General Topic: Play in Education.

Observation Problem: How may the highest utility of play be realized for physical development?

1. Make a list of, and be prepared to describe, the different kinds of equipment provided for the playground.

2. Do children play continuously at the same game, or is the play properly diversified?

3. Mention such games as appeal to you as being over-strenuous or too tame to engage the best efforts of the children.

4. Try to account for any cases of children not joining heartily in the games. Account for the charm of games or exercises which the children seem especially to enjoy.

5. Note cases of children with parts of the body out of symmetry, deformed, or injured. Do they give evidence of pain or incapacity in following the activities of the games?

6. Point out situations in which a high degree of physical self-control is called for, and tell the kind of control in each case.

7. Mention features of the activities engaged in which seem to tend toward ungainly habits of posture or movement. Mention features, also, which seem to promote accuracy and grace in action.

8. Record such signs of fatigue as you observe.

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Johnson,—*Education by Plays and Games,* I, II, III. [Ginn]
(b) Angel,—*Play,* I-II; 50-54. [L. B.]
(c) Curtis,—*Education Through Play,* II. [Ginn]
(d) Strayer and Norsworthy,—*How to Teach,* IX. [Mac.]

EXERCISE LIX

General Topic: Play in Education—(Continued).

Observation Problem: How to realize the highest utility of play: (a) What is the position of the director with reference to the group? (b) What intellectual aspects are involved?

1. Are there tendencies to formalism in the activities, or are they spontaneous and free?

2. What evidences do you note indicating that the person or persons teaching the children their games are admitted by the children to full membership in the play groups?

3. What impressions do you get as to the general cordiality of relations between the playground director and the children? Compare the situation in this respect with that of the ordinary classroom.

4. Do children who have not been long in attendance at the playground show marked poverty of knowledge of games?

5. Make a list of features of games witnessed which show important knowledge elements.

6. Make note of situations calling for quickness of intellectual response. Note differences in children in meeting the demands of such situations.

7. In cases calling for quick judgment on the part of players as to the probable course of action of another player or group, try to determine the basis of judgment. Is it valid?

8. What instances do you observe of the use on the playground of classroom types of knowledge and training, as number, language, music, rhythm, etc.?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Curtis,—*Education Through Play,* III. [Ginn]
(b) Wilson and Wilson,—*Motivation of School Work,* 48-49; 157-162. [H. Mif.]
(c) Kirkpatrick,—*Individual in the Making,* 19-24. [H. Mif.]

EXERCISE LX

General Topic: Play in Education—(Concluded).

Observation Problem: How may the highest utility of the playground be realized for moral-social training?

1. Give evidences indicating that the playground discipline is of the autocratic or the democratic type.

2. Give instances, if possible, showing the play of each of the following motive forces in the playground activities: self-activity, emulation, rivalry, pugnacity, destructiveness, approbation, love of distinction.

3. In case of quarreling, teasing, bullying, fighting, etc., try to determine the motives involved. How are these things dealt with by those directing the playground activities?

4. Mention situations tending to develop a sense of justice in children.

5. In what ways are children's sense of duty appealed to?

6. Try to determine promptings of respect in pupils toward their playmates or the playground director.

7. Make an effort to put some child in a situation testing his loyalty or sense of honor in relation to the group. What evidences convince you that his feelings in the matter are genuine? What social values are brought to light?

8. Are moral improprieties permitted on the playground? Do you find evidence of their taking place under cover of secrecy?

Summary:

Things to Imitate:

Things to Avoid:

Questions:

References:

(a) Curtis,—*Education Through Play*, IV. [Ginn]
(b) Johnson,—*Education by Plays and Games*, 46-64. [Ginn]
(c) O'Shea,—*Social Development and Education*, Part I and Chapter XI. [Mac.]
(d) Smith,—*Introduction to Educational Sociology*, 83-90. [H. Mif.]

RESUME

Completion of the foregoing exercises, or even a portion of them if judiciously selected, will develop in the student of teaching some measure of actual understanding of the nature of well constituted school procedure. The operations proper to the classroom can no longer mean to such a one mere perfunctory routine. They will be seen to have a foundation in substantial principles which have come to have a permanence comparing favorably with those underlying the work of the court room or even the science laboratory. Some contact will have been made with that body of learning pertinent to teaching activities, aside from the subject-matter to be acquired by pupils, which in scope and profundity does not any longer need to beg for respect. But the experience gained that is particularly to be desired is that which makes for acquaintance with specific, typical forms of classroom stimulus, often intricate in character and difficult to create.

High grade proficiency in teaching, as in other callings, is directly dependent upon clear insight into its essential processes. The masterful worker in any field proceeds confidently from one thing to another, knowing every step of the way "what he is about." His activities have taken on organization. It will be our purpose to review in this final section the fundamentals underlying the organization of class procedure as exemplified in the exercises constituting the main body of this manual.

Exercises I to IX are devoted to an examination of the principal factors entering into teaching operations, command of which constitutes what we call class management. These are—the conditioning of pupils properly for work; the selection of proper kinds of subject-matter; the maintenance of order and attention; creation of situations supplying adequate motive for work; and the like. This phase of teaching is of the nature of getting ready for the work of actual instruction, combined with keeping things out of the way of its successful progress.

The more important of the two heads under which the technic of teaching may be considered is made up of those things which are involved in carrying on what is commonly called the "recitation." It is unfortunate that this term, recitation, should continue to be used for so broad and productive a factor in education as the one which it is used to designate. Notwithstanding its accepted broader application it continues to suggest primarily the same narrow type of procedure which it was invented to signify, viz., the formal reproduction of answers to questions asked by the teacher, both answers and questions often being found ready-made in the textbook. It smacks in so decided a way always of the purely memoriter type of performance as to render it a highly objectionable term for the designation of a form of activity so varied in character and often exactly the opposite of reciting. The term is freely used with a wide connotation covering types of procedure from the catechetical on the one hand to the most spontaneously self-controlled group activity on the other, but scarcely ever without stronger

suggestion of the former than of any other. For these reasons the name, recitation, has been consistently avoided in this manual, and in its stead *class exercise* has been used.

When a class is at work under the guidance of its teacher the occasion is accepted as one calling into play at one time or another all of the mental powers, and offering opportunity for initiative, spontaneous social exchange, discovery, and even invention. We may refer to this situation as a *class exercise* with entire correctness. The varied character of the activities properly belonging in the period which it designates is admitted in the term; at least there is no hint of exclusion of the best things which the period may afford. Among these best things may be named—the fine management of conditions by the teacher so as to furnish motive and take away unnecessary obstacles; fertile association of one thing with another, resulting in better understanding of one or both, or of things of that kind in general; glorious unfolding in the child mind from mystery or obscurity to clearness and vividness of understanding; and persistence in application or use of knowledge until it becomes a permanent life reliance.

The basis of the technic of the class exercise is reached through careful analysis of the operations to which it gives place. Numerous authors of educational works have devoted themselves more or less at length to such analysis. Some years ago the present writer undertook to bring together the best judgment on the subject available from books embodying discussions of the "Recitation." A certain amount of agreement seemed to obtain; at least conclusions were reached which can by no means be regarded as individual.

The first consideration worth recording here has to do with the ends or purposes of class work. Some of the less modern writers have seen fit to descant by the page on what they call the "Purposes of the Recitation." Colgrove in *The Teacher and the School* has brought together several lists of these so-called purposes as given by various authors. The following are taken from these lists as representative rather than as the worst or the best:

1. To find out what the pupil knows and how he knows it.
2. To train pupils in original expression.
3. To enable the teacher to estimate the daily progress of his pupils.
4. To permit pupils to ask questions upon knotty points in the lesson.
5. To broaden and strengthen the life interests of the child.
6. To arouse interest in the next lesson, stimulate pupils to study it, and to direct their study.
7. To test the ability of pupils to master the subject.
8. Pupils' comparison of each others results.
9. To acquire well-founded self-confidence.
10. The building of character.

It is to be admitted that these statements without exception set forth useful accomplishments realized at least in part by way of the class exercise. They are not, however, to be called definite purposes; accidents would be a term perhaps about as justifiable. It would be interesting to see how long a list of such "purposes" one could write. After all, they have not been without their value in drawing attention to highly useful school products. The gains to which they point

are to be regarded, however, as following upon the regimen of the school in general rather than as being purposes specifically so called, setting up and determining the nature of procedure.

There are ends having this latter definite and technical character belonging to the class exercise. They are determining in their relation to it. They are starting points from which the teacher thinks out the procedure to be followed as well as goals toward which it moves when in operation. These may be classified under two heads, *general* and *specific*. *General aims* are few in number, and corresponding with them are quite definite *types of procedure*. *Specific aims*, on the other hand, are almost innumerable and of infinite variety, even as the corresponding individual lessons. Further discussion will be necessary to make this difference clear.

The following tabular arrangement will serve to show the correspondence between *general aims* and *types of precedure*:

General Aims	*Types of Procedure*
1. To test pupils' knowledge, preparation, or power.	Testing.
2. To gain a concept, principle, or other form of generalization.	Inductive inference.
3. To interpret or utilize an individual object or situation.	Deductive inference.
4. To learn how to acquire or use data.	Study.
5. To form habit.	Drill.
6. To motivate pupils' application, impart information, or stimulate appreciation.	Conversation or lecture.
7. To cultivate social feeling and give training in social coöperation.	Self-controlling group activities.

The foregoing seven correlates manifestly are of the nature of abstract or general conceptions. The types of procedure may be said to represent classifications of classroom activities, each type or class being called into play for the achievement of the correlative general aim set opposite to it. When habit becomes the objective, for example, the drill is adopted as the type of procedure. Again as interpretation, identification, nature, or use of an individual thing is to be learned, deductive inference, or development as some would say, becomes the method. Each one of the seven types may find place in any subject of the curriculum, and yet one or another rises to pre-eminent importance in dealing with subject-matter of a certain kind. Thus, testing takes a place of importance in a memory subject like locational geography; inductive inference in the early stages of arithmetic and grammar; deductive inference in problem-solving; and so on. Units of time enter even less than the nature of subject-matter as a reason for preferring one kind of procedure over another. A type of teaching has no reference necessarily to a class period as ordinarily understood. Quite infrequently will any single general aim be held to throughout a period, particularly in the longer periods of the upper grades. Work will accordingly pass from one to another form of procedure within very short space. Not infrequently two of them may be made to work practically in combination.

Lengthy discussion of the classification presented above is not required here, inasmuch as that would mean duplication of literature on the subject that is sufficient to our needs and relatively easy of access. Re-reading of the references given under Exercises XI to XVI will serve the student in clearing up any lack of understanding which he may feel regarding the nature of any of the processes occurring in our scheme. Exception should possibly be made in the case of our Conversation-Lecture type, which will be discussed further on.

As signified in very much condensed form in the first of the general aims, there is occasion from time to time for testing pupils' entire *knowledge* of a subject, their *preparation* of assigned lessons, or their *power* to do specific things. The best single criterion of value of testing activities is that which looks primarily to application of the results of learning in meeting present or anticipated life situations. Such a point of view moreover would contemplate learning through use as well as testing through use. Hence testing will find place in a measure as a component of almost any other type of procedure. It has its distinct and separate place, however, and may take a variety of forms.

The first among these forms is the formal written or oral examination, which seeks to ascertain the completeness of a pupil's command of a subject as a whole, or the extent to which he has profited from the work reaching back over an extended period of time. Secondly, it may seek to check up on the grasp which pupils have gained of a specific thing as: the multiplication table of threes, the distinction between *their* and *there,* or the distinguishing characteristics of the plumb curulio. Here would be involved finding out whether work is being kept up or whether assignments have been done. Thirdly, it contemplates putting pupils to trial as regards their powers of performance in certain lines. Can they, for example, stand before an audience and express their ideas in reasonably correct and effective English? Or, can they write neat, legible hands? The means of testing may be, best of all, a circumstance, as nearly accidental as possible from the pupil's point of view, which presents to him the possibility of working his way out only by use of the educational values to reach which the test was made.

A highly useful means of meeting this first general aim is through the use of objective tests. The Courtis and Studebaker tests in arithmetic, the Thorndike handwriting scale, the Ayers spelling scale, and a few others, have been used far enough to have given rise to fairly reliable standards of attainment in the several school subjects for each of the grades from the third or fourth up. No prominence was given these tests in the foregoing Exercises for the reason that they have thus far found extended use only among administrators and have not yet come into prominence in the training of elementary teachers.

We shall not give place here to treatment of induction and deduction separately. This course is taken, not because of unwillingness or inability to recognize them as separate entities in learning, but because they are so closely inwrought with each other in practical thinking and teaching. Exercises XII and XIII present exemplification of each separately by way of favoring the student's understanding of the fundamental nature of each. Both mental operations are likely to be brought into play in any instance of reflective thinking, and hence they are involved in answering genuinely thought-provoking questions. The

kind of lesson for which we have come to use the term *problem* or *project* is probably the best point of view from which to consider their practical use. Illustration of this use is sought under Exercises XXVI, XL, XLI, XLII, XLIII, XLIV, XLV, XLVI, LIV, and LV. Simplification of either of the processes as well as the relation between them is perhaps best attained on the basis of the familiar mental act of association. If it is a matter of gaining a concept or discovering a principle or law, association of things with one another until the process results in a general conception of common meaning is in essence the nature of the thinking involved, to which we give the name induction. When we are desirous, on the other hand, of classifying or learning to know an individual thing, we proceed again by association, this time deductively, referring the thing in question to the general mental image which it resembles. Or in case it may be a matter of determining the correctness of a course of action, moral or intellectual in nature, we likewise refer it to a principle or law setting forth relations which show us more or less clearly what to do. No possible amount of explanation can show what these processes mean so well as extended illustration. In recognition of this fact a liberal amount of attention has been given them in the Exercises. They have been generously elaborated, moreover, for the reason that right conditions of thinking as well as logical methods of thought constitute a chief concern in the regimen of the school.

Study, aside from pure memorizing is not essentially different from what we have just been considering, because it has to do with the *gathering and using of data,* to the end of establishing conclusions. As ordinarily found, it contemplates the use of books as primary sources from which data are drawn. Almost anything, aside from books, may be the subject of study, it is true, in which case we give ourselves to observation of the thing itself and inquiry or experimentation directed in such a way as to bring out its behavior. Again, we may profit from experience which individuals may have had with it, so far as we may be able to acquaint ourselves with such experience. In schools, even, where approved forms of supervised study are provided for, training in study is still necessary from time to time as a feature of the appointed class exercises. The function of the teacher in the class exercise devoted to study is not in any marked degree different from what it is in properly constituted supervised study. The essential point of difference between the two is that in the first instruction is given predominately *en masse,* while in the second it is individual. With the group working together at study, the following important advantages may be realized:

1. Division of labor in looking up and recording points of information.
2. Comparing notes and judgments.
3. Economy through giving essential instructions to several at a time.
4. Utilizing special talents, such as drawing, verbal descriptions, and mathematical calculation.
5. Stimulus coming to individuals from working in a group.
6. Intensification of effort through energetic example and leadership of the teacher in concerted, concentrated attack of difficulties.

To the foregoing advantages relating to the success of the study itself might be added important results, the principal of which would be training in coöperation.

Teaching pupils to memorize would properly constitute a feature of almost any study lesson; but the lesson would thereupon pass into the drill type, at least, if it became practice in memorizing as contrasted with instruction in how to memorize. It could, however, take the form of individual, silent repetition with occasional test performances. This type of study, except for the mass instruction just mentioned, can probably best be taken care of through supervision of the efforts at memorizing of individual pupils in their periods of private study. While the importance of memorizing is not to be denied, it is unfortunate that it still remains in the minds of many teachers, at least as evidenced by their practices, the sum total of study. We have endeavored to show that study in reality means investigation, and coupled necessarily with this, the accumulation, through conscious memorizing in part, of a stock of reserve data that may be brought to bear in the solution of future life problems.

Repetition was mentioned in the preceding paragraph as the prime essential of memorizing, and the like relation which it bears to the drill type of teaching was implied in what was there said. When *formation of habit* is the end desired in class work, a mode of procedure is to be adopted which will secure extended repetition with focalized attention. This is the universally accepted route to habit. In many instances which have come under the author's observation teachers in attempting drill work only succeeded in testing or reviewing the class in hand. They did nothing more than to ask questions which called out material previously covered, including telling how certain things are done; but in it all they failed to bring about in any real sense *repetition.* The emphasis in the kind of work just referred to is upon recall, which is helpful to abstract memory, but which is not of large service in developing habit. To form habit there must be repetition, repetition over and over, and again repetition. We do not mean merely repeating today what was done yesterday, and tomorrow what was done today, essential as this is, but repeating the same thing many times within the same teaching period. This is the first essential; and to it must be added avoidance of monotony, rigor of performance, and "persistence to the point of automatism." Methods of giving the qualities of novelty, variety, and zest to drill exercises are pointed out to the students in the readings cited under Exercise XV, hence no attempt will be made to present them here. The drill is, of course, not successfully used without at least a fair command of these methods. Nor are the values arising from it realized if work done on a specific type of activity is not followed up from time to time at properly lengthened intervals until the desired result in the form of actual habit is at length attained.

The conversational type of work is not difficult to describe or understand. It is essentially what takes place when any relatively small group of persons come together. They give themselves spontaneously to an exchange with one another of experience and opinion on whatever subject leading spirits amongst them are for the time being interested in. As a type of school procedure it is in effect the same. The teacher only as the chief of leading spirits in the group, now proposes ideas that are relevant to the attainment of the specific aim of the lesson in hand; now represses tendencies in untoward directions; and now deftly turns the thoughts of the group against obstacles or untruths, always encouraging expression, never cajoling or scolding. It is a favorite form of

work in primary classes, finding place besides more or less all the way up to the university seminar.

We have compounded the terms *conversation* and *lecture* because it seems desirable to recognize as legitimate and highly useful, even in the most informal primary school conversation, somewhat extended remarks by the teacher, which in advanced classes may rise practically to the dignity of the lecture. Let it be said, however, with insistence that the teacher in all grades of work below the college or university should very rarely appear in the role of the formal lecturer. It is desirable that the activities of the classroom in high school and grades should be carried on for the most part by the pupils rather than the teacher; and yet, when pupils are hearing a clear, fluent, spirited presentation by the teacher, such a presentation as is demanded by the occasion, their minds are active in a way truly to be desired. It is going counter to facts to contend, as seems to be the inclination of some, that lasting impressions are not made in this way, and that a desirable type of training is not afforded. Active expression of themselves by pupils, after all, should predominate greatly in the conversational-lecture exercise, the remarks of the teacher being usually brief as befits a participant in conversation and extending themselves into brief or somewhat lengthy discourse only as occasion may truly require. So used, this type of procedure is justifiably calculated to *motivate pupils' application, impart information, and stimulate appreciation.* Its relation to such vital aims of the school as moral-social attitudes and ideals is obvious.

There is little distinction to be made between the strictly conversational type of procedure and the so-called "socialized recitation." Few of the performances which arrogate to themselves this latter popular name have in them any significant values beyond those connected with the former very old-fashioned exercise. The distinction of the truly socialized exercise is one of aim on the one hand and of responsibility for its on-going on the other. In both respects it is preeminently social. The aim is to *cultivate social feeling and to afford training in social coöperation.* The procedure in order to realize in the largest way this aim is socialized to the extent of making the class in the fullest possible measure self-controlling. It shows pitiable lack of comprehension of the meaning of this type of work when the teacher goes no further in the direction of socialization than to put a pupil behind the teacher's desk, whose appointed duty is to "conduct the lesson" by asking the class a list of questions which he has prepared in advance. Pupils are admonished by the teacher, who sits by the side of the teacher-pupil or in the back of the room, to "take part"; but everyone hangs upon the looks and actions of the teachers, as of old, to know what is the expected thing to do. This way of doing does not, in the least, take the teacher out of the situation, as this kind of exercise contemplates doing. Placing a pupil before the group as its leader for the time being is altogether proper, but his function should be only to preside. The proceedings of the hour should come "from the floor," that is, from the membership of the class. The teacher had better refuse to take any part whatsoever until the class conference has concluded its work; and then mistakes can be pointed out, and needed instruction can be given. After the class is somewhat practiced in the method and has become somewhat trained in *carrying the responsibility,* the teacher may safely participate, but even then only in a limited

way. To turn the class completely into the form of an organized committee or club has been found to be the best way to make its activities take on truly socialized character.

Following this discussion looking toward making clear the meaning of, and relations between, *general aims* in teaching and *types of procedure,* a word further seems necessary regarding the term *specific aims,* which was introduced at the outset of the analysis of class instruction. These are nothing more than the Herbartian lesson aim, which recurs so frequently in nearly all literature on school methods. To illustrate we may refer to Exercise L. In this Exercise the Observation Problem is the following: "How may the history story be used most effectively in the teaching of history?" The *specific aim* of the lesson which one excellent teacher used for exemplification under this problem was this: "To learn the story of Elizabeth Zane and her relation to early Revolutionary times in our history." It will be seen readily that a large number of separate objectives might inspire lessons that would exemplify things sought in any one of the Exercises set forth in this manual. Thus each lesson has its specific aim, while all lessons in their various parts take the form of one or another of the seven types of procedure which move toward the general aims corresponding to them.

This discussion of the foundation of lesson organization should not be permitted to draw attention away from the mind of the pupil in action. The only reason why procedure is to be carefully considered is because more appropriate and stronger forms of stimulus may thus be brought to bear upon school children. Nothing should be permitted to obscure the fact that the pupil's growth and development depend upon his own activity. Nicely worked out forms of procedure are, therefore, not ends in themselves, but only means. If the teacher has his mind wholly upon the working of his plan, as he teaches, his work is likely to have the effect of a speech that is only declaimed. It will not reach those for whom it is intended. If, on the other hand, the teacher follows with tenacious interest the performances of pupils, his very attitude will have power to draw out of the pupil the best that he can do. It will tend toward growth, too, on the part of the teacher himself, in power to discern the workings of the youthful mind and to make adaptations accordingly. The best teachers exhibit this faculty in marked degree.

Having worked through the Sixty Exercises and noted the underlying unity of them as the author has endeavored to present it in this Resume, the student must certainly have formed a much more meaningful conception of teaching. A clear grasp of this foundation of procedure would seem to tend strongly toward clear-cut, effective classroom work. It should create such an aversion toward shallowness and bungling in teaching as will reduce these to a minimum and favor educational results more nearly commensurate with existing needs. It is to be hoped that the student may be influenced to put his mind definitely to the task of contributing his full part toward correcting defects in the existing regimen of the school and putting the teacher's calling ultimately upon the dignified basis of a learned profession.

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